

KENWOOD®
HI/FI STEREO COMPONENTS

SERVICE MANUAL

L-01A

An item of adjustment is written in three languages - English, French and German.

Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.

Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.

Caution

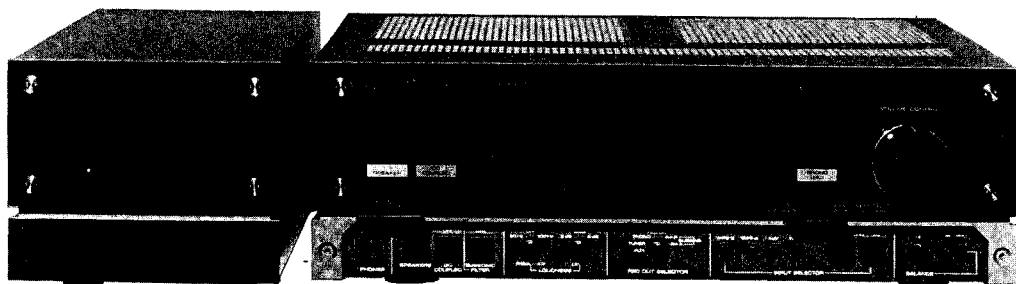
- Do not touch the copper plate with naked hand because it is liable to rust. If fingerprints are left on the plate, remove them with a steel brush.
- The cabinet is made of nylon resin. Do not place any hot object such as a soldering iron on the cabinet.

Avertissement

- *Ne pas toucher la plaque de cuivre avec les mains nues car elle est susceptible de rouiller. Si des empreintes digitales sont laissées sur la plaque, les nettoyer à la brosse métallique.*
- *Le coffret est en résine de nylon. Ne pas placer d'objets chauds tel qu'un fer à souder sur le coffret.*

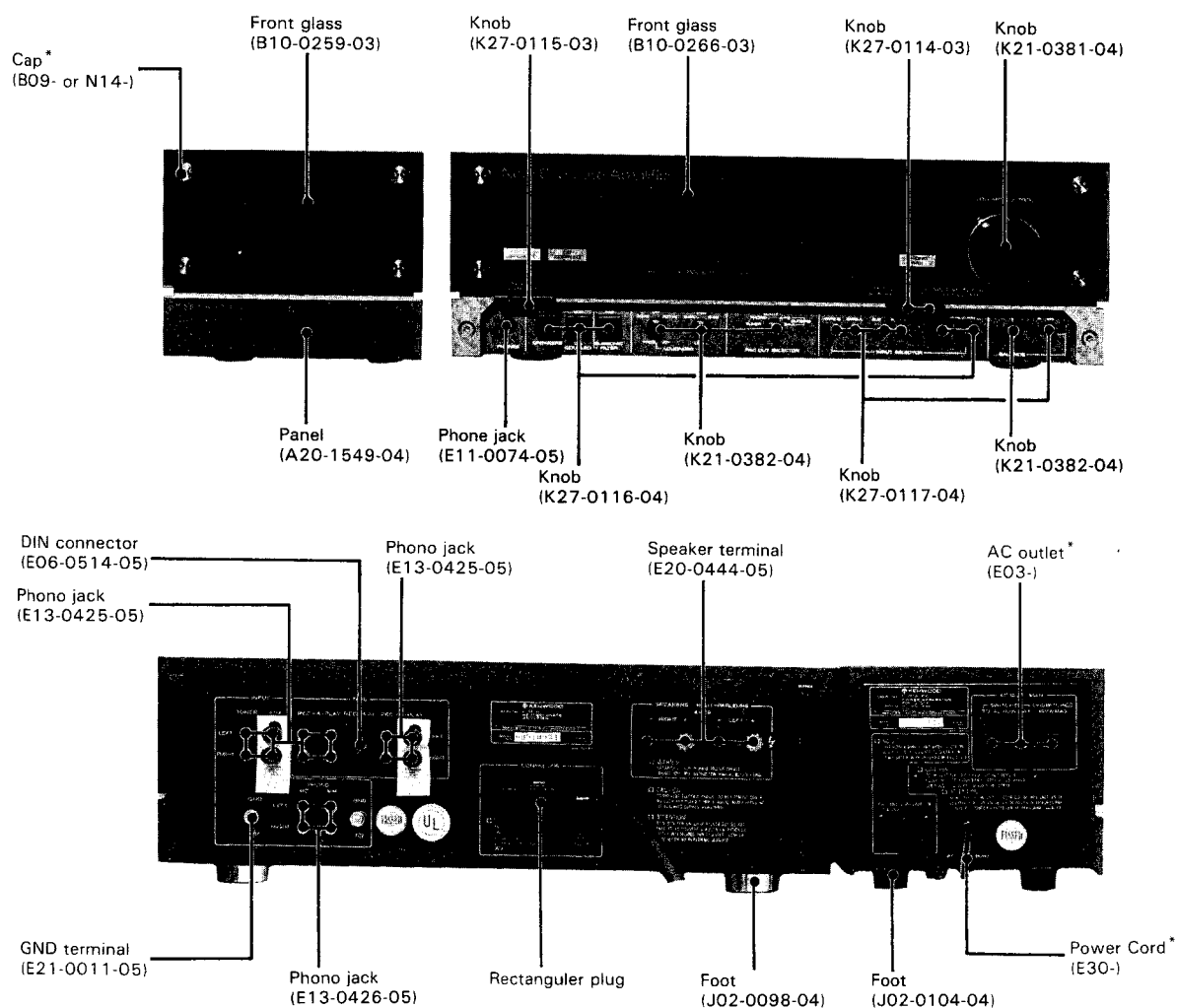
Vorsicht

- Die Kupferplatte nicht mit der bloßen Hand berühren, weil diese sonst rosten kann. Bleiben Fingerabdrücke auf der Platte zurück, diese mit einer Stahlbürste entfernen.
- Das Gehäuse besteht aus Nylonharz. Keinen heißen Gegenstand, wie z.B. ein Bügeleisen, auf das Gehäuse stellen.

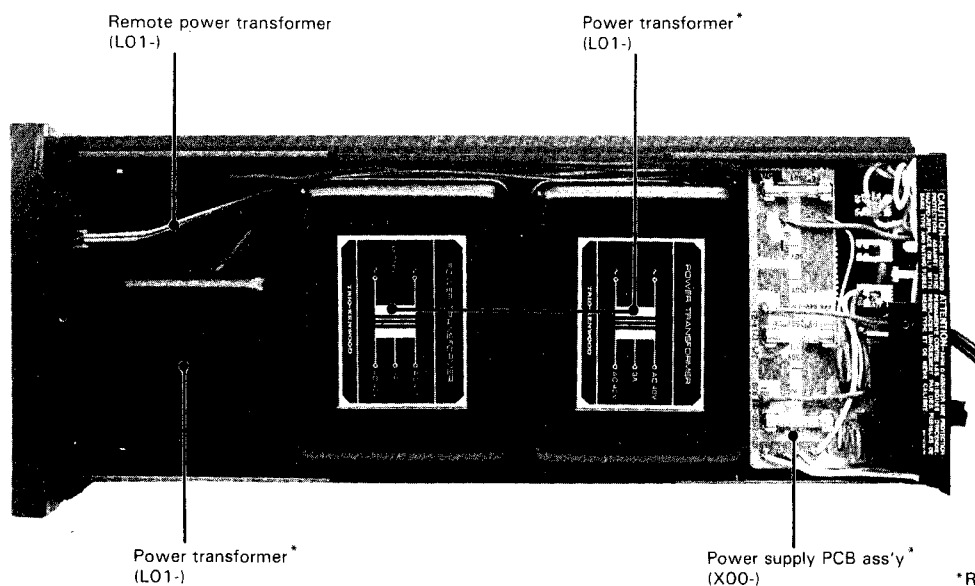


NEW SEPARATE AMPLIFIER

EXTERNAL VIEW/INTERNAL VIEW



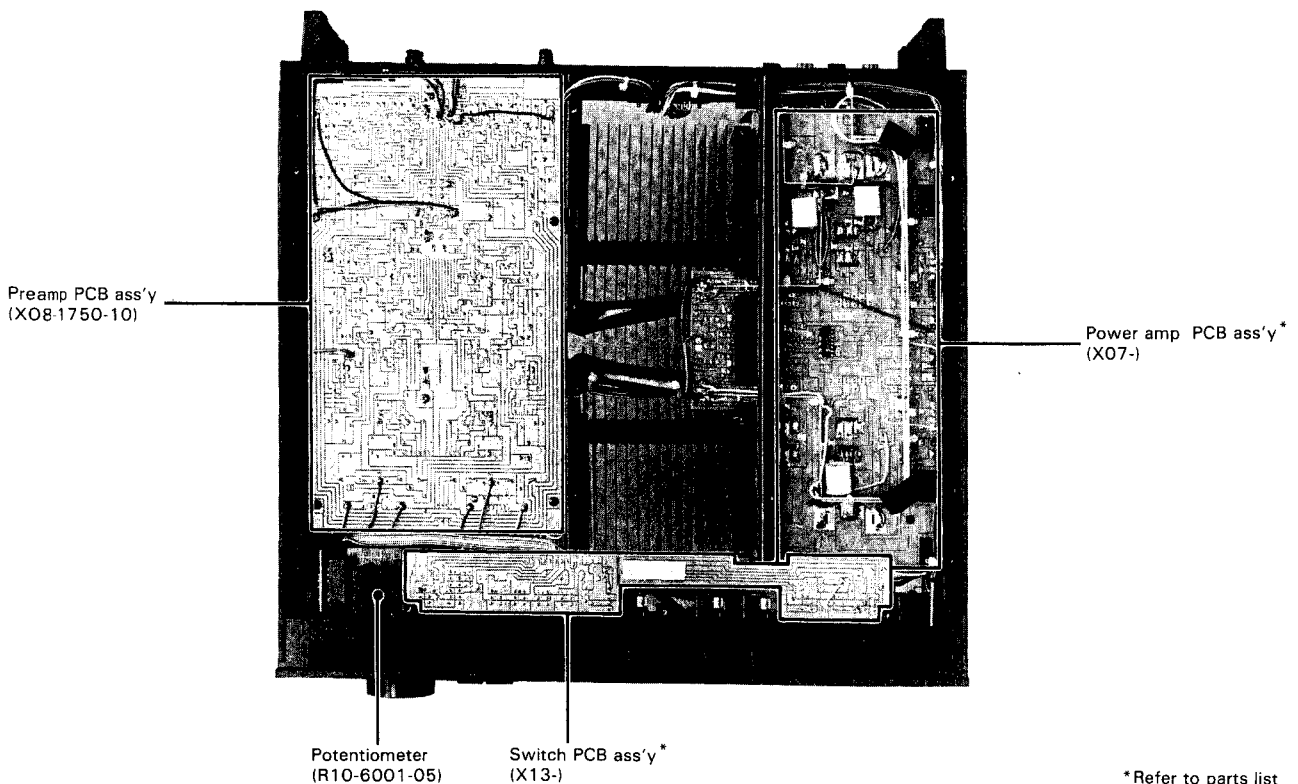
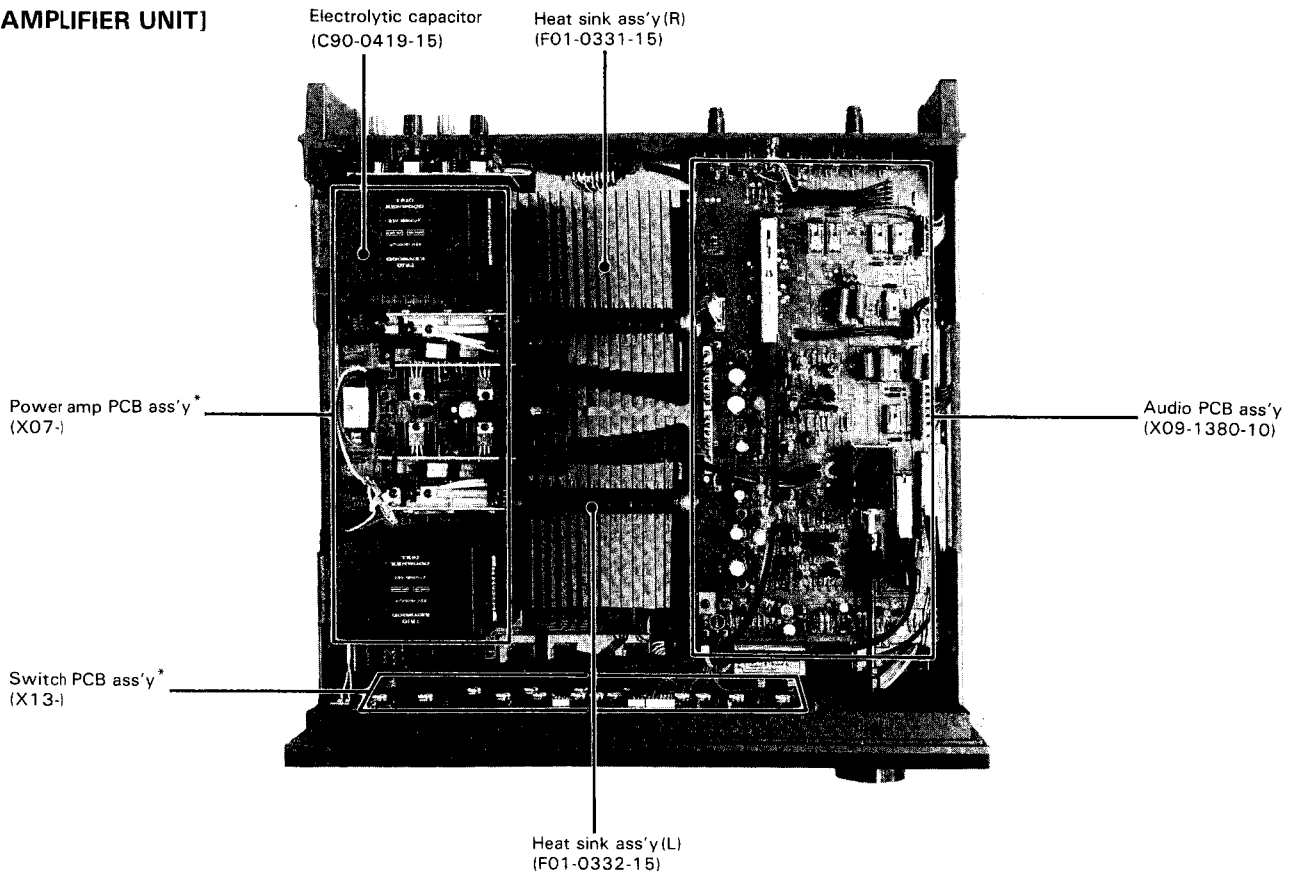
[POWER SUPPLY UNIT]



*Refer to parts list.

INTERNAL VIEW

[AMPLIFIER UNIT]

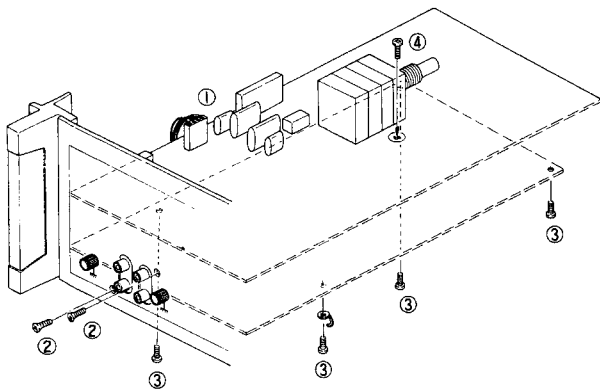


*Refer to parts list

DISASSEMBLY FOR REPAIR

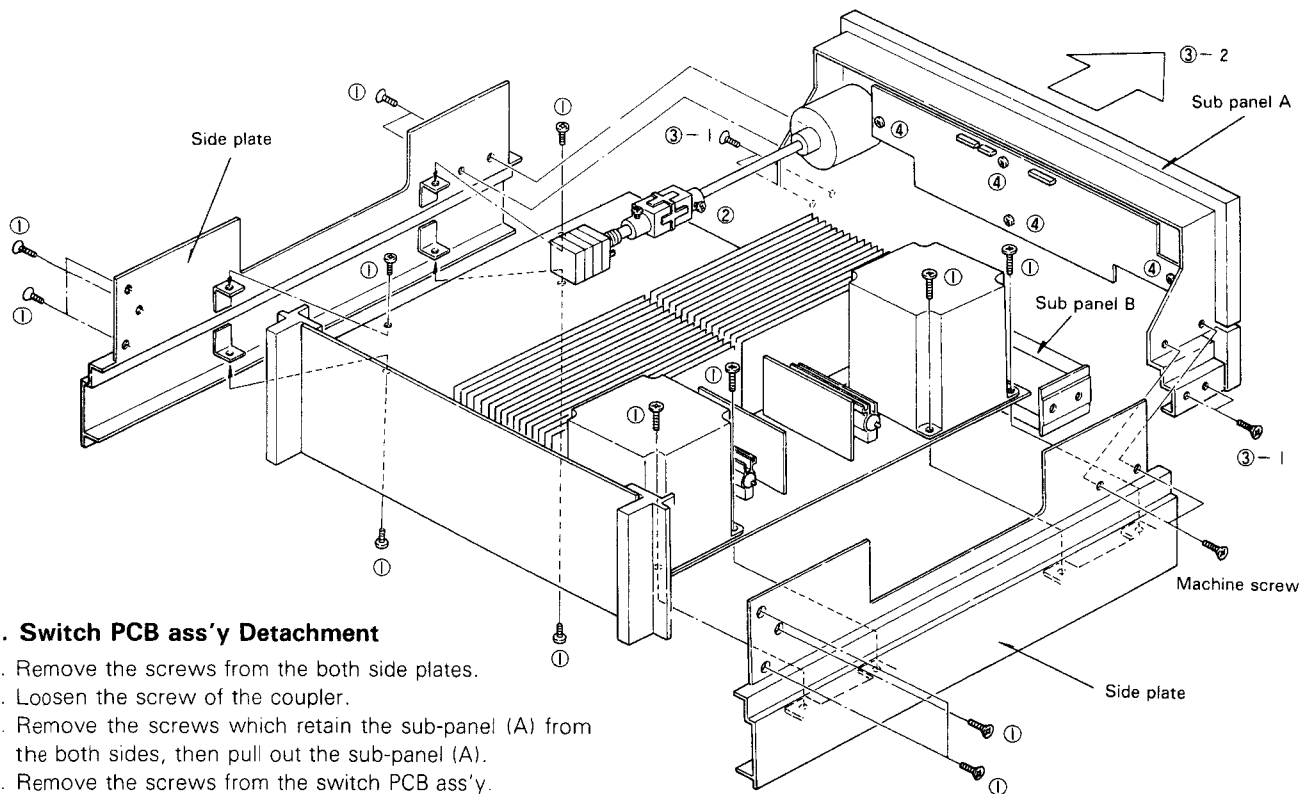
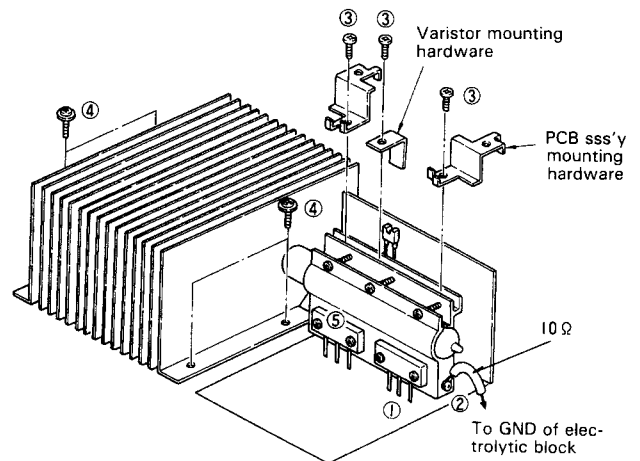
1. Preamp PCB ass'y Detachment

1. Pull out the connector.
2. Remove the screws from the PHONO terminals on the rear panel.
3. Remove the screws from the PC board from the bottom.
4. Remove the screw from the copper plate of the preamplifier.



2. Power Transistors Replacement

1. Unsolder the legs of the power transistors from the bottom side.
2. Remove the screw mounting the 10 Ω wire from the side of the heat sink.
3. Remove the varistor mounting hardware and the PCB mounting hardware.
4. Remove the heat sink mounting screws.
5. Replace the power transistors.



3. Switch PCB ass'y Detachment

1. Remove the screws from the both side plates.
2. Loosen the screw of the coupler.
3. Remove the screws which retain the sub-panel (A) from the both sides, then pull out the sub-panel (A).
4. Remove the screws from the switch PCB ass'y.

Note:

To replace the face panel, after steps 1—3, remove the screws which retain the panel from the bottom side.

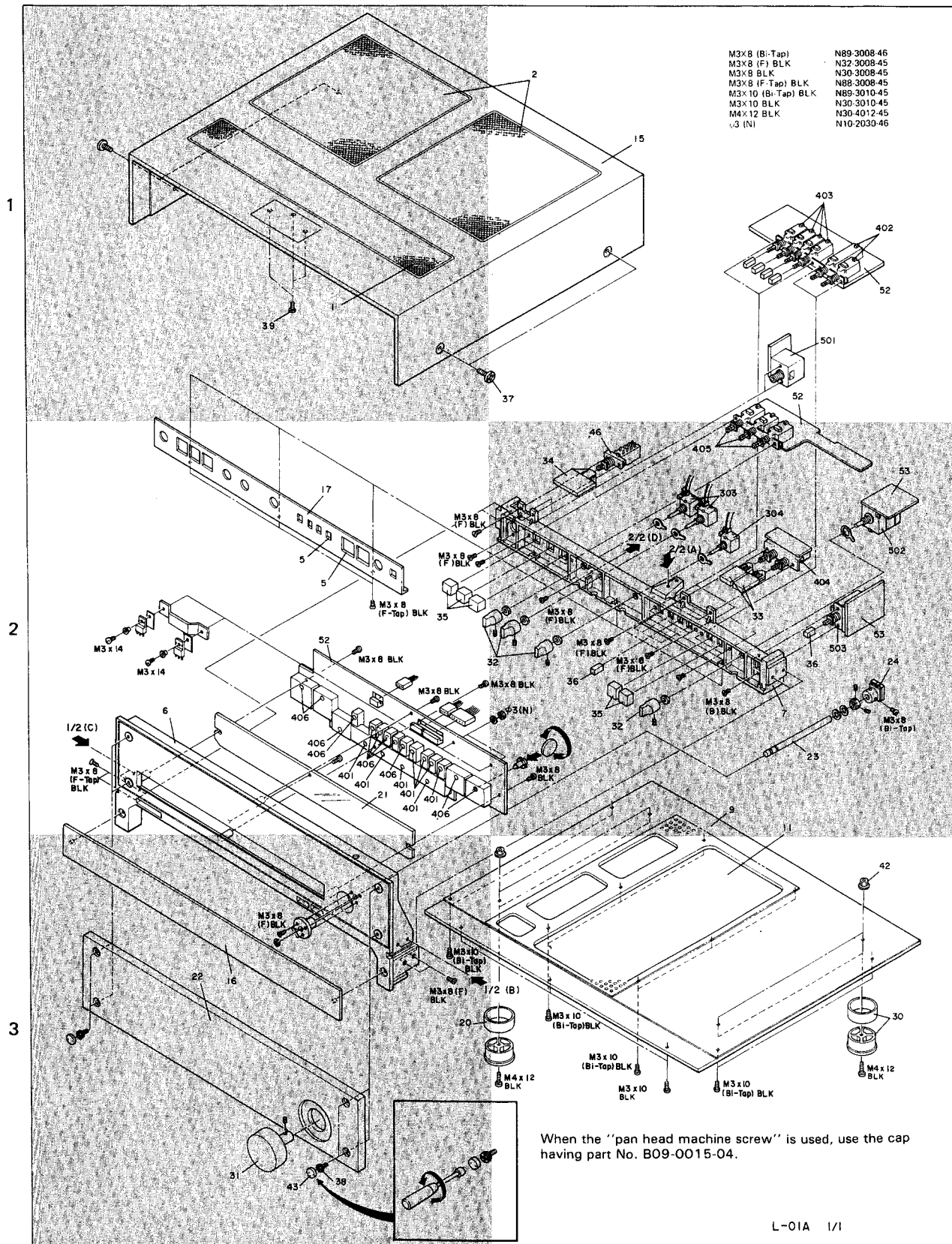
To remove the knobs (LOUDNESS, REC OUT, BALANCE ON/OFF), loosen the hex setscrew using a hex wrench through the access holes in the bottom side of sub-panel B.

EXPLODED VIEW

L-01A

A

B



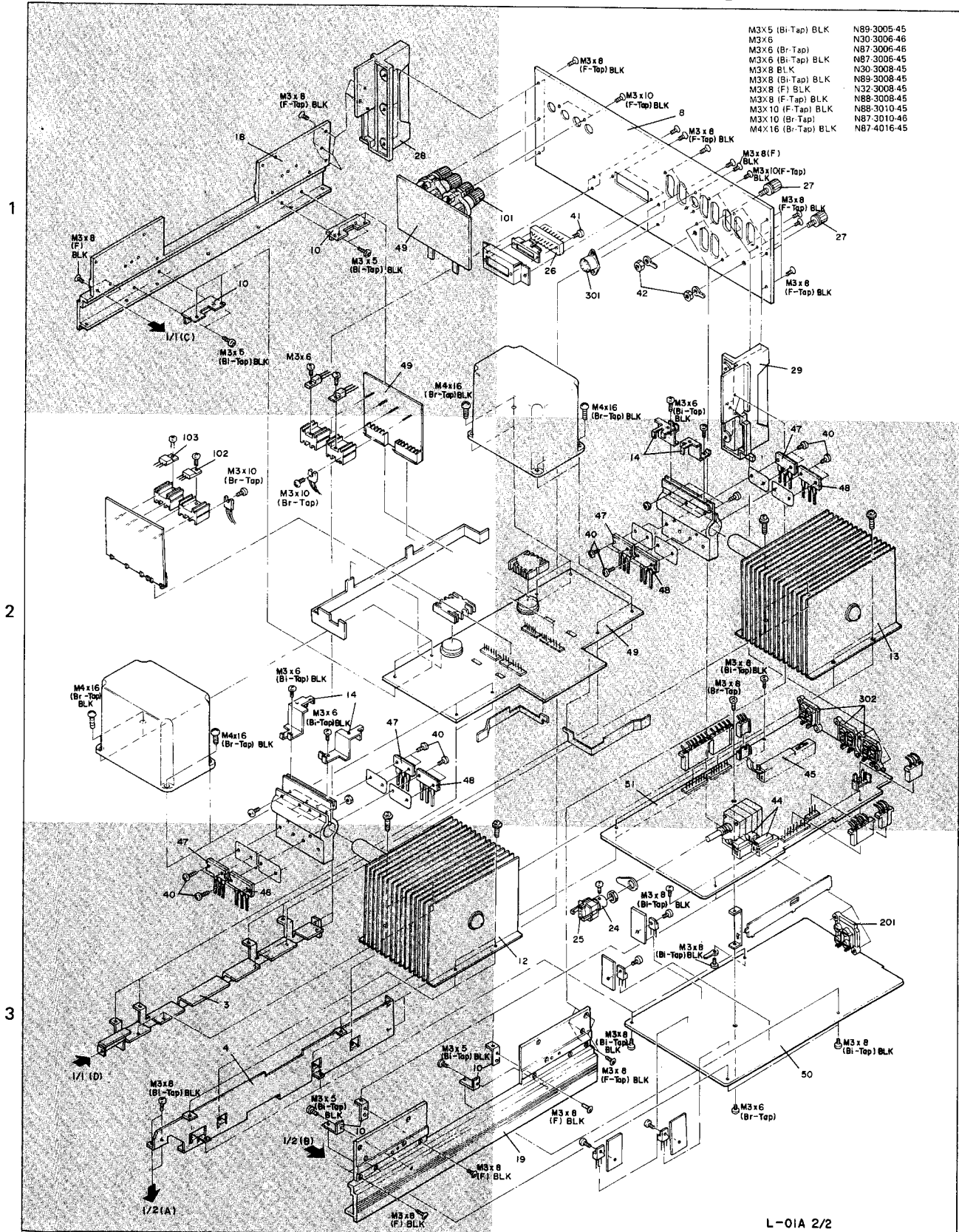
Refer to parts list on page 20 and 21.

EXPLODED VIEW

L-01A

C

D



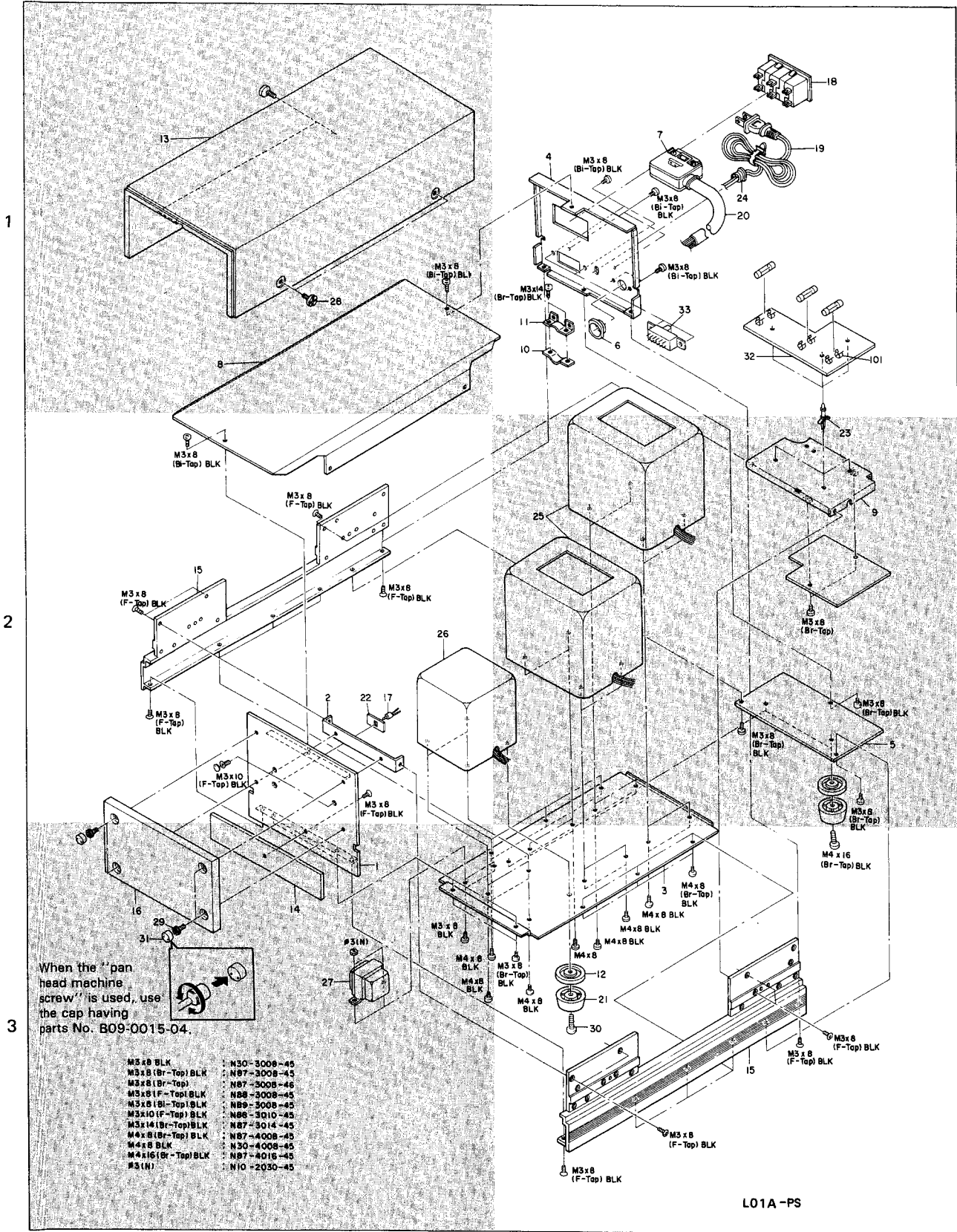
L-01A 2/2

Refer to parts list on page 20 and 21.

EXPLODED VIEW

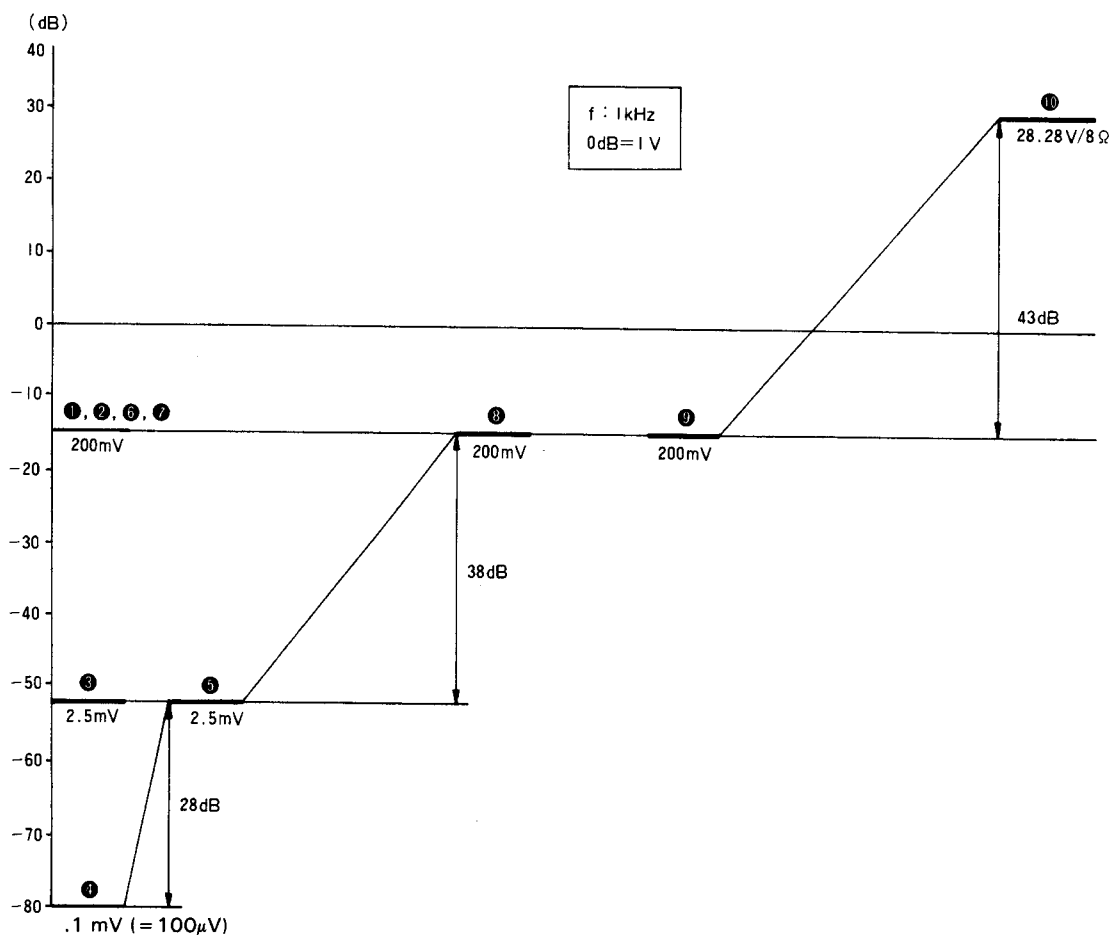
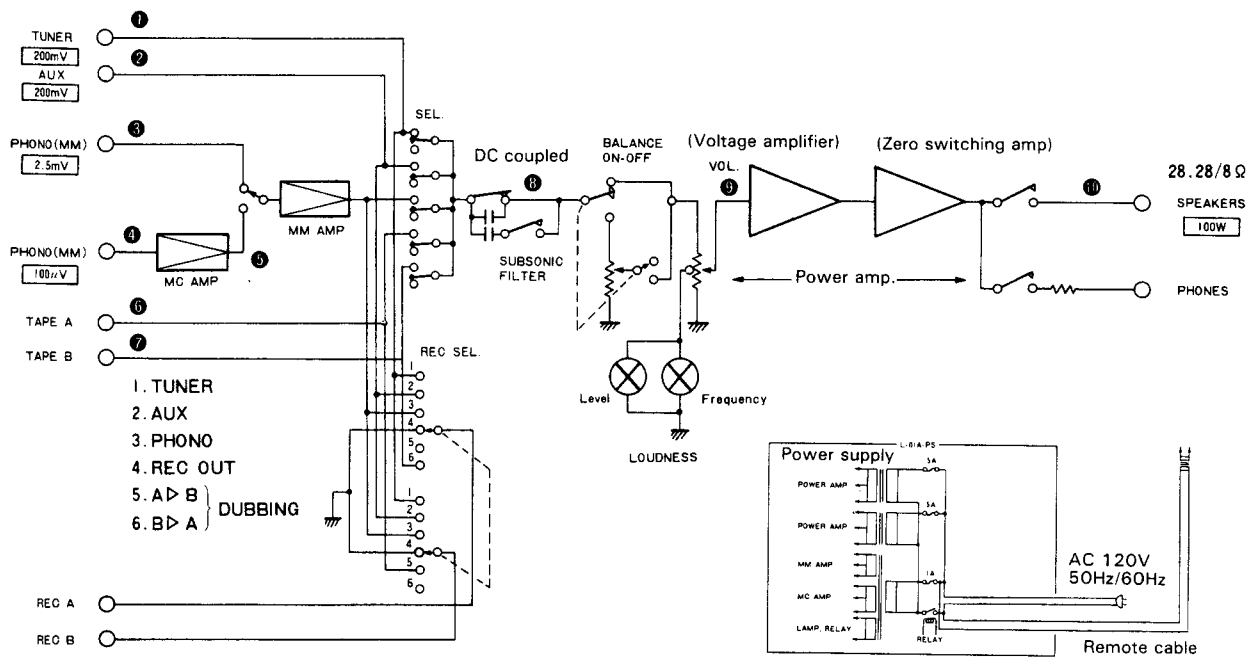
L-01A-POWER SUPPLY A

B



Refer to parts list on page 20 and 21.

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

In the L-01A, an ASO protection circuit, a zero-switching circuit, a relay delay circuit and a shunt regulator in the preamplifier are employed. For explanation of circuit operation of the parallel input circuit, refer to the KHA-50 service manual. For explanation of circuit operation of the constant current circuit, differential amplifier and current mirror circuit, refer to the service manual of the L-07C and L-07M.

1. ASO Protection Circuit

When an excessive current flows through the power transistors, a voltage appears across the protection resistor, $0.1\ \Omega$ connected to the collectors of the power transistor Q1, Q3, Q5, Q7. When this occurs at the PNP transistors, a voltage is applied to the base of the ASO transistor Q1. Therefore, Q1 is turned ON, then a voltage is applied to the base of Q3, and Q3 is turned ON, so that the audio signal fed to Q7 is limited.

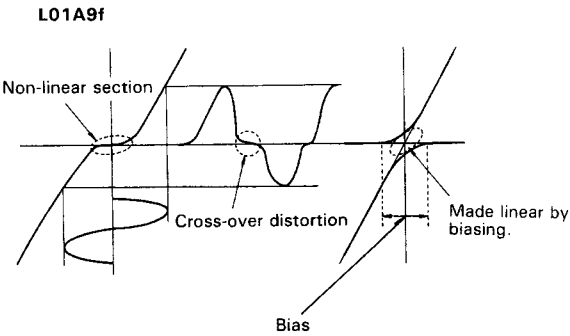
Since the base of Q15 is connected to the collector of Q3, the base voltage of Q15 drops when Q3 is ON. Therefore, Q15 is turned ON. Thus, a voltage (reference value: 1.8 V) is applied to Pin 3 (0 V detection terminal) of IC1, resulting in release of the protection relays RL2 and RL3.

When an excessive current flows through the NPN transistors, the voltage is applied to the base of Q5. When Q5 is ON, the audio signal fed to Q9 flows through Q5, so that the base current of Q9 decreases.

2. Zero-switching Circuit

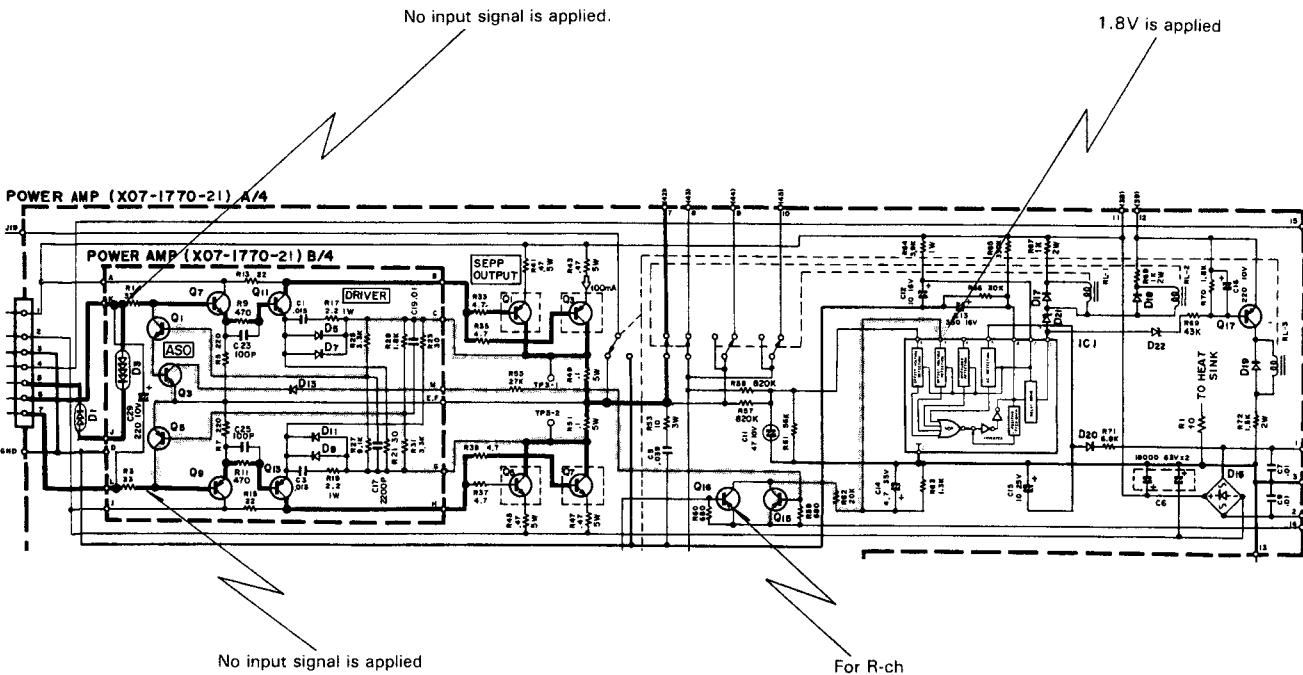
Ordinary power amplifiers are operated in class B because of its high efficiency. However, switching distortion and cross-over distortion are generated.

The cross-over distortion is generated because a class B push-pull amplifier uses the non-linear section of the input-output characteristic curve when input level is low.



To reduce the cross-over distortion, the power transistors are appropriately biased so that the non-linear section is cancelled. Thus, the amplification is operated in close to class AB.

On the other hand, the switching distortion is generated because the switching ON/OFF timing of the SEPP transistors differs. The output stage of the power amplifier generally has SEPP connection.



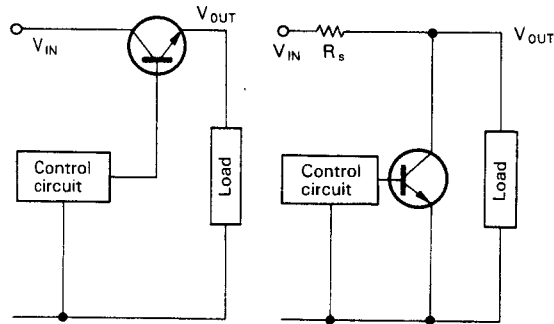
< ASO Protection Circuit >

CIRCUIT DESCRIPTION

4. Shunt Type Regulator

A shunt type regulator is provided in the power supply of the preamplifier.

This shunt type regulator controls the output voltage by shunting the load current with a shunt device (transistor).



(a) Series path type regulator

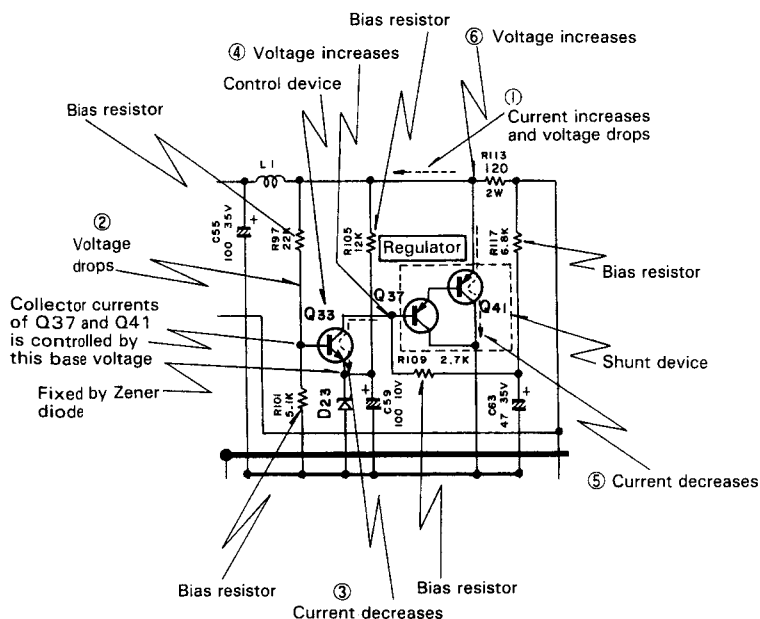
(b) Shunt type regulator

The one advantage of the shunt type regulator is that a high resistivity against overloads or short-circuited loads can be obtained by selecting the power consumption of the resistor (R_s in the schematic above) which is connected in series to the voltage source. However, the shunt device is connected in parallel with the load circuit and so a large current must be made to flow, resulting in a large power consumption and low efficiency.

The circuit operation is as follows. An appropriate bias is generally applied to the base of Q33 so that a certain current flows through Q37 and Q41. Therefore, V_{CE} of Q41 is kept constant.

When the load current increases, the base voltage of Q33 drops, resulting in the collector current of Q33 decreasing. Then, the base voltage of Q37 increases and the collector current of Q37 decreases. Therefore, the collector current of Q41 decreases and V_{CE} of Q41 increases.

When the load current decreases, the base voltage of Q33 increases and the collector current of Q33 increases. Then, the collector currents of Q37 and Q41 increase. Thus, V_{CE} of Q41 drops.



< Shunt type regulator and its operation >

PREAMP OFFSET VOLTAGE ADJUSTMENT

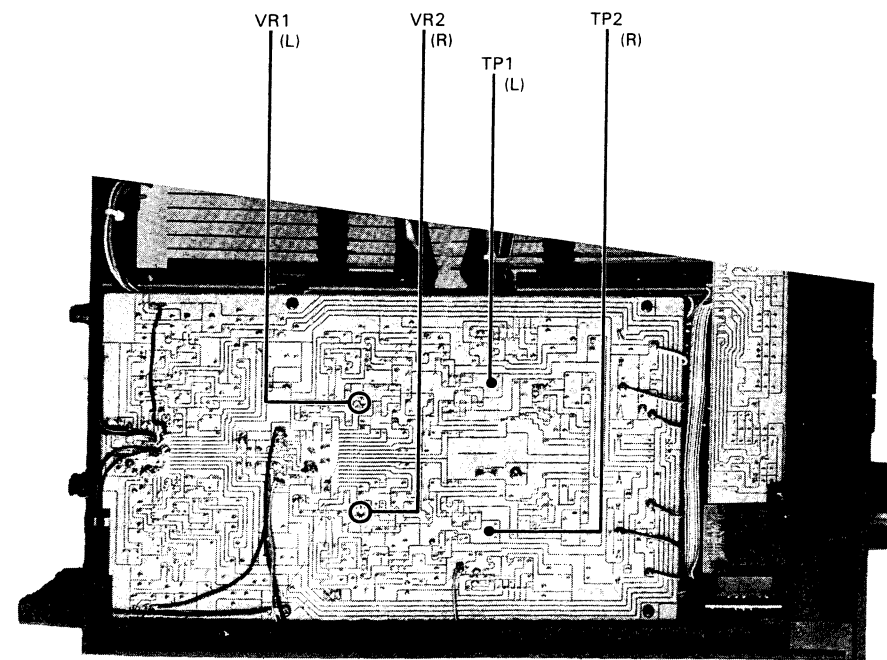
1. Disconnect the phono cord from the phono jacks.
2. Connect a DC voltmeter between the test point 1 and GND (2 and GND) of the Preamp (X08-1750-10).
3. Adjusting the trimming pot. VR1 (VR2), for 0V reading of the DC voltmeter.

POWER AMP OFFSET VOLTAGE ADJUSTMENT

1. Connect the DC voltmeter between the \oplus and \ominus speaker terminals. (TP5, 6)
2. Adjust the trimming pot VR1 (VR2) for a 0V reading of the DC voltmeter.

POWER AMP BIAS CURRENT ADJUSTMENT

1. Turn the volume control knob fully counterclockwise.
2. Connect the DC voltmeter between the collector of Q1 and of Q5. (TP3, 4)
3. Adjust the trimming pot. VR3 (VR4), of audio (X09-1380-10) for 20 mV reading of the voltmeter.



< PREAMP OFFSET ADJUSTMENT >

RÉGLAGE DE LA TENSION DE DÉCALAGE (OFFSET) EN SECTION PREAMPLI

1. Débrancher les câbles PHONO des prises jacks.
2. Brancher le voltmètre c.c. aux points d'alignement. 1 et GND (2 et GND), sur la plaque du circuit imprimé du préampli (X08-1750-10).
3. Régler le potentiomètre ajustable VR1 (VR2) de façon à ce que le voltmètre à C.C. indique 0V.

RÉGLAGE DE LA TENSION DE DÉCALAGE (OFFSET) EN SECTION AMPLI

1. Brancher le voltmètre à C.C. aux bornes de sortie \oplus et \ominus (TP5, 6).
2. Régler le potentiomètre ajustable VR1 (VR2) pour que la tension de sortie soit nulle.

RÉGLAGE DU COURANT DE POLARISATION

1. Tourner le bouton du commande de volume à fond dans le sens inverse de celui des aiguilles d'une montre.
2. Brancher le voltmètre à C.C. sur le collecteur de Q1 et Q5. (TP3, 4)
3. Régler le potentiomètre ajustable VR3 (VR4) de façon à ce que le voltmètre à C.C. indique 18 mV, sur la plaque du circuit imprimé de l'ampli. de puissance.

OFFSET-SPANNUNG DES VORVERSTÄRKERS

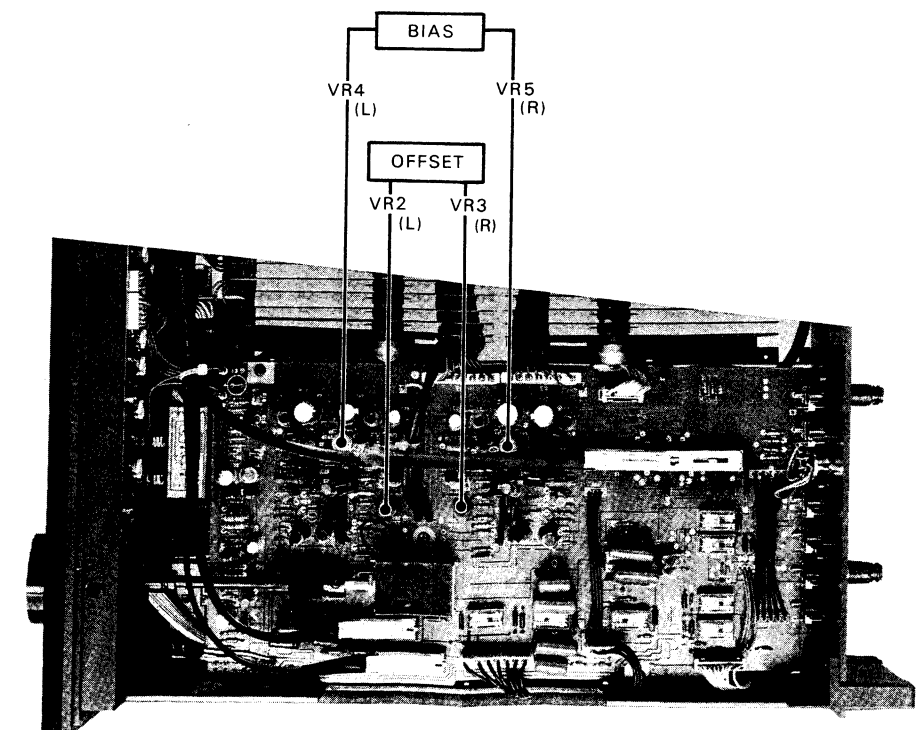
1. Die PHONO-Schnur aus den Buchsen PHONO MM oder den Buchsen PHONO MC.
2. Den Gleichspannungsmesser zwischen dem Regulierungspunkt 1 und der Erde (2 und der Erde) des Vorverstärkers (X08-1750-10) anschließen.
3. Den halbeingebetteten Widerstand VR1 (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.

OFFSET-SPANNUNG DES ENDVERSTÄRKERS

1. Den Gleichspannungsmesser zwischen der Regulierungspunkt \oplus und \ominus des Endverstärkers anschließen. (TP5, 6)
2. Den halbeingebetteten Widerstand VR (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.

LEERLAUFS

1. Den Lautstärkeregler (VOLUME) drehen um die Endstärker-Aufnahme auf Null zu reduzieren.
2. Den Gleichspannungsmesser zwischen der Emitter Elektrode von Q1 und der Elektrode von Q5. (TP3, 4)
3. Den halbeingebetteten Widerstand VR3 (VR4) so regulieren, daß die Gleichspannungsmesser-Ablesung 18 mV ist.

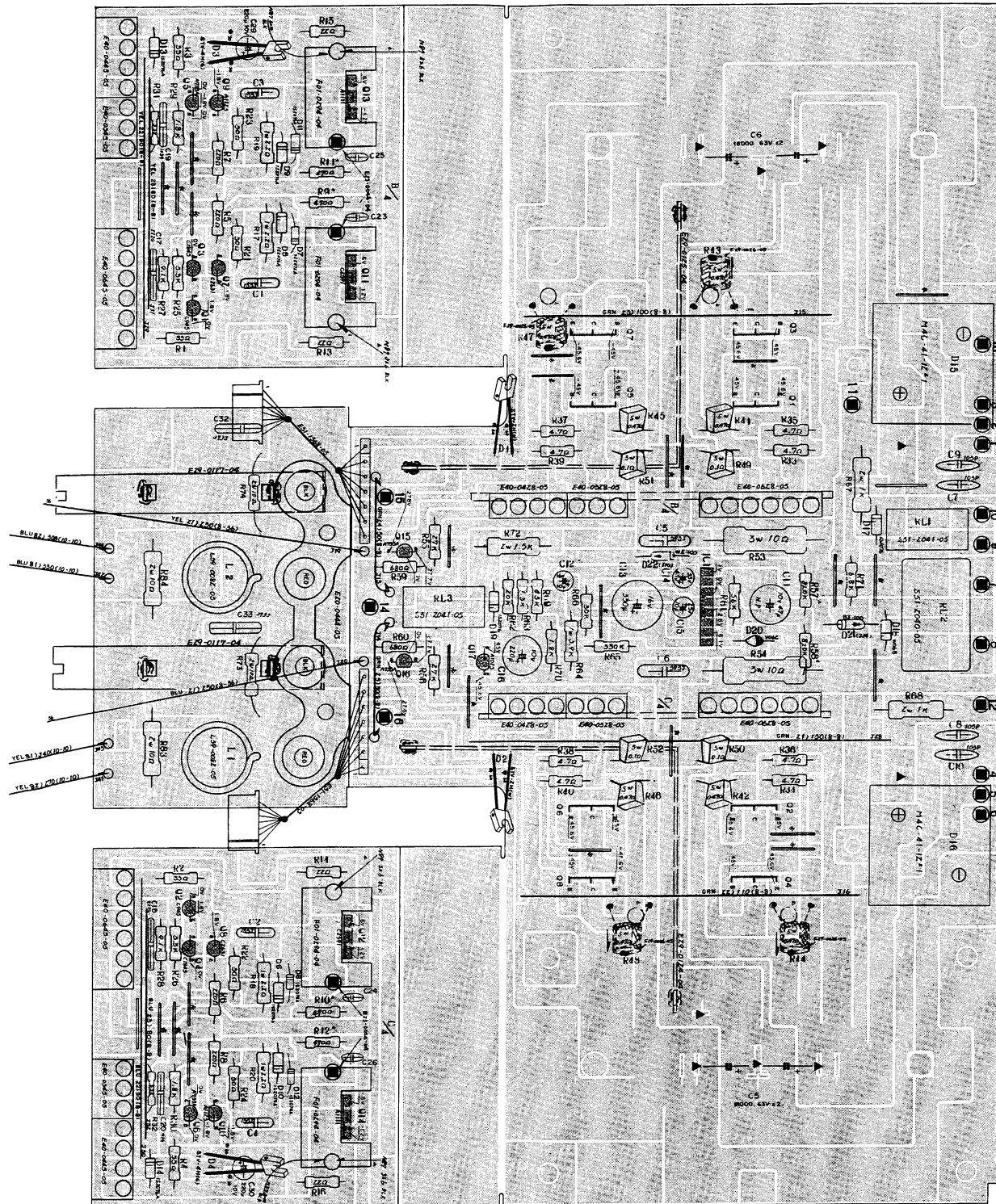


< POWER AMP OFFSET AND BIAS CURRENT ADJUSTMENT >

PC BOARD

▼POWER AMP (X07-1770-21) (Components side view)

▼SWITCH (X13-2650-21) (Components side view)



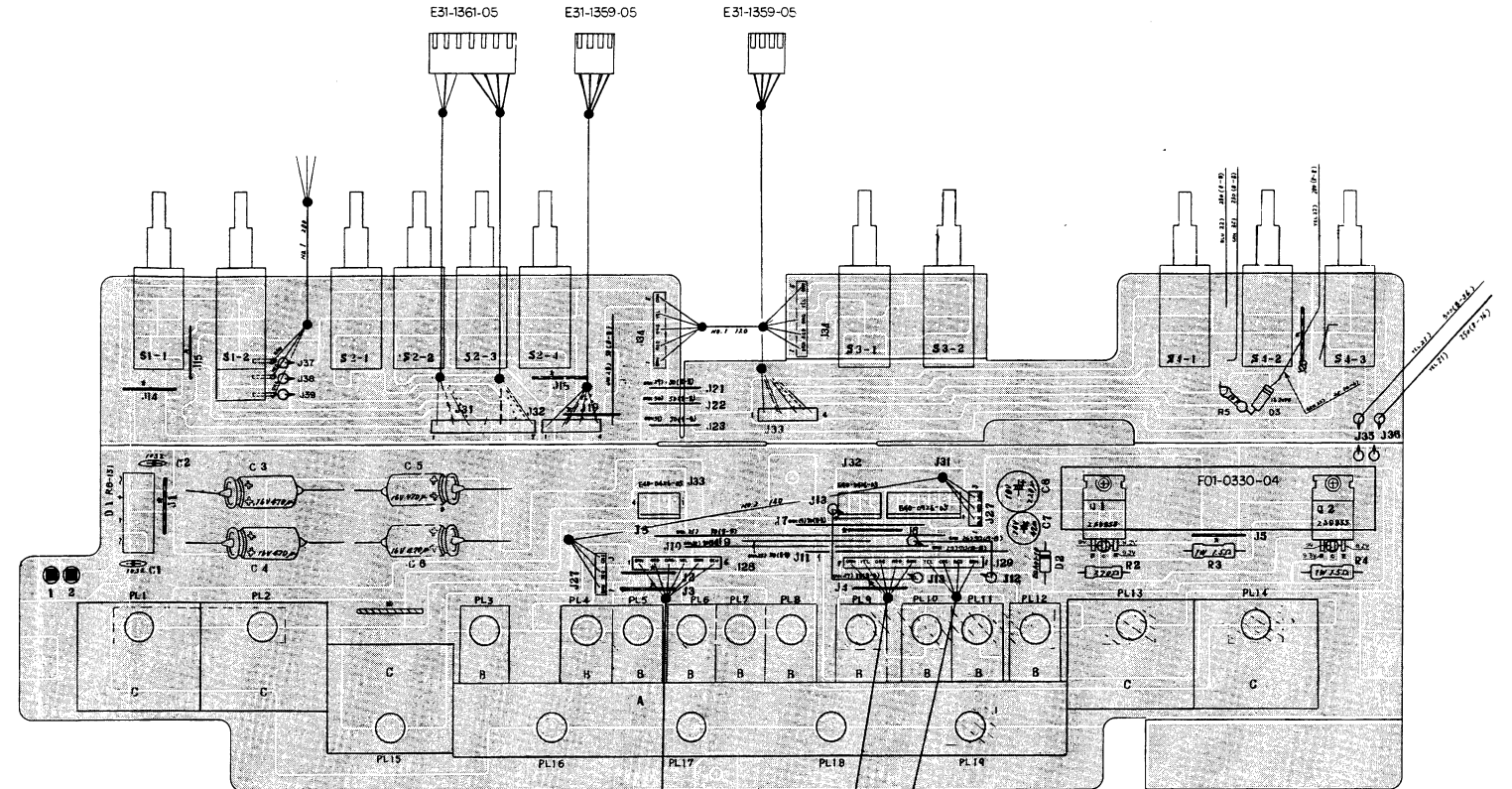
2SA733 2SC945
2SA1023 2SC1845
2SA1123 2SC2631

2SA1111
2SC2591

HA12002

Q1,2: 2SC945
Q3,4: 2SC1845
Q5,6,15,16: 2SA733A
Q7,8: 2SC2631 (Q R S)
Q9,10: 2SA1123 (Q R S)
Q11,12: 2SC2591 (Q R)
Q13,14: 2SA1111 (Q R)
Q17: 2SA1023
IC1: HA12002

D1,2: STV-2H(W)
D3,4: STV-4H(G)
D5-14: IS2076A
D15,16: M4C-41-12 *1
D17,19: IS2076
D18: W06B
D20: V06C
D21: BZ-100
D22: WZ-100



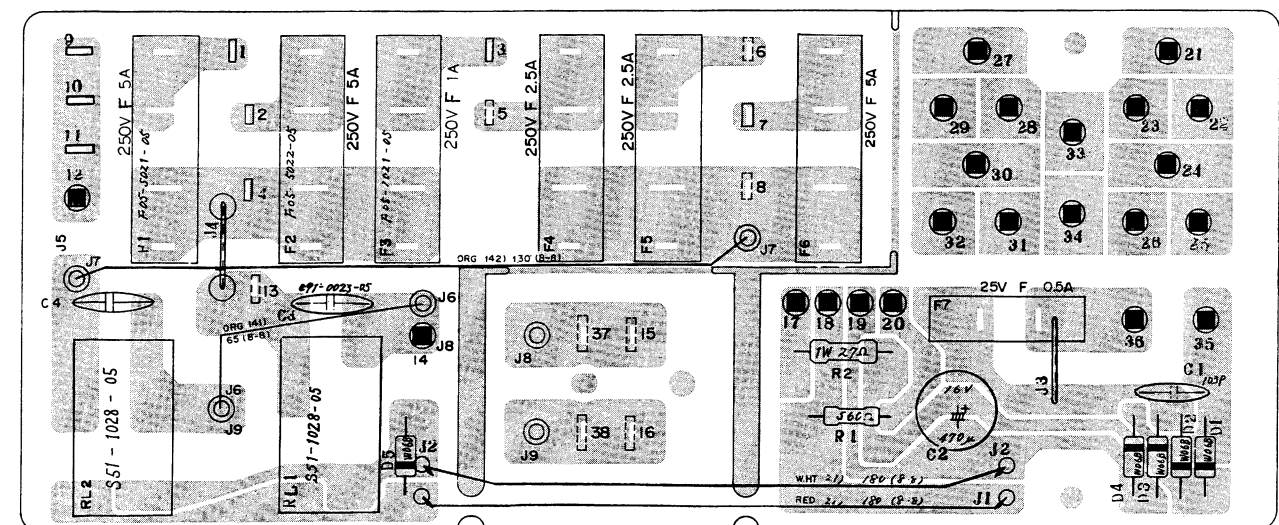
2SD855

E31-1360-05

E31-1362-05

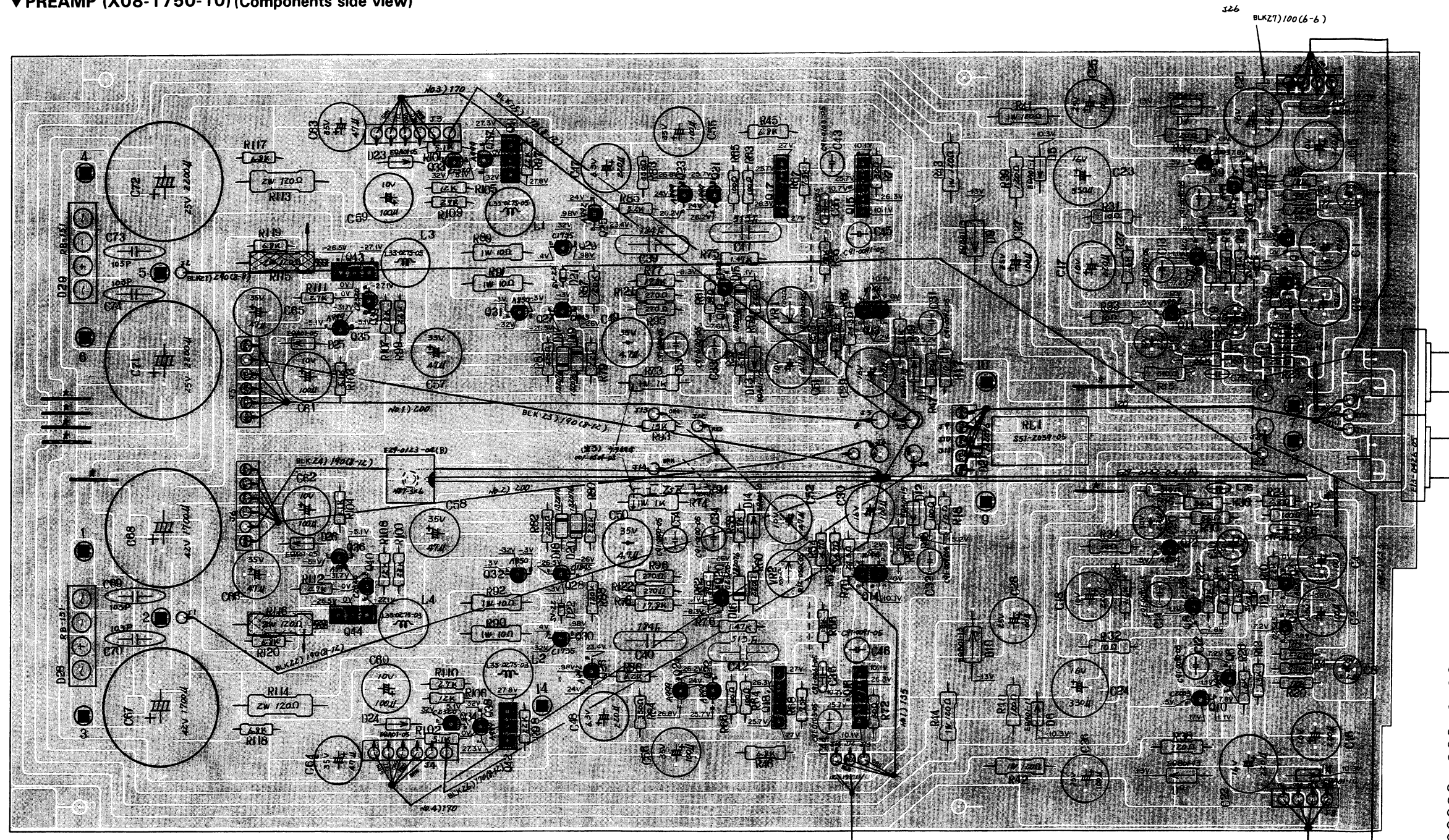
Q1,2: 2SD855(BD)
D1: RB-151
D2: EQA01-10(S1)

▼POWER SUPPLY (X00-2080-11) (Components side view)

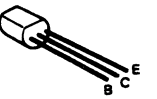


PC BOARD

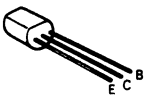
▼PREAMP (X08-1750-10) (Components side view)



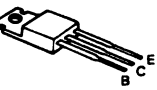
2SA850
2SC1735



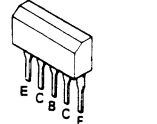
2SA992
2SA999
2SA1083
2SC945
2SC1845
2SC2003
2SC2320
2SC2545



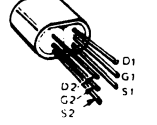
2SB724
2SD762



2SA995
2SC2291



2SK146



Q1,2 : 2SC2545 (D E)
Q3,4 : 2SA1083 (D E)
Q5,6,21~24, 36~38 : 2SA999 (E F)
Q7,8,19,20,33,34,39,40 : 2SC2320 (E F)
Q9,10 : 2SC2003 (M L)
Q11,12 : 2SA954 (M L)
Q13,14 : 2SK146

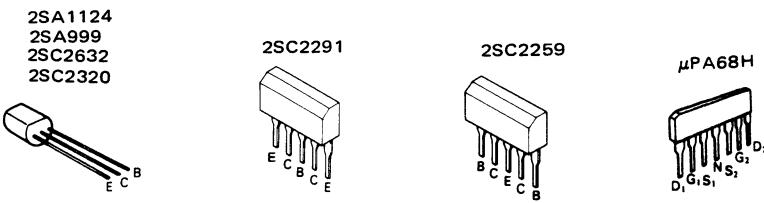
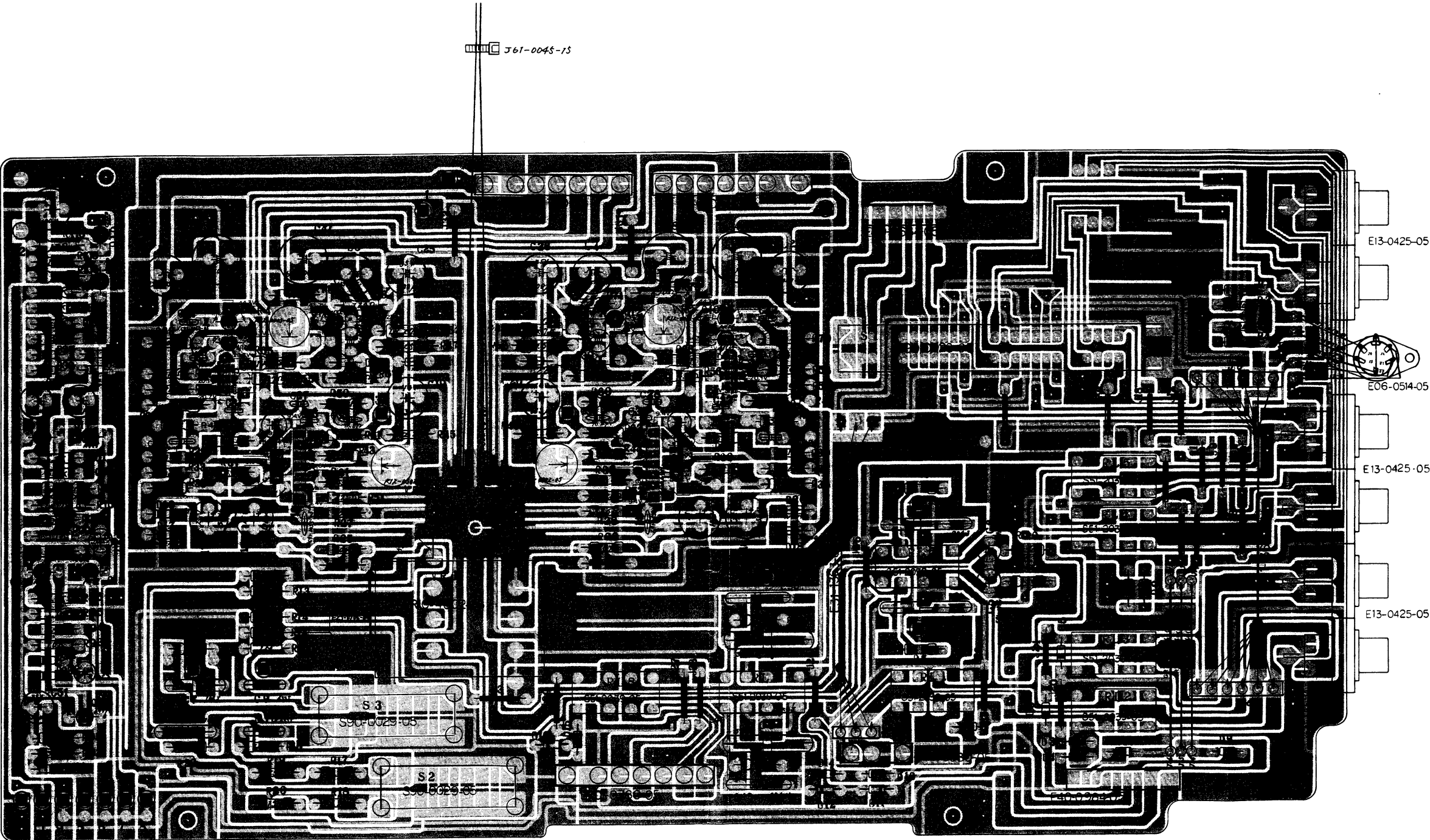
Q15,16 : 2SC2291 (F G)
Q17,18 : 2SA995 (F G)
Q25,26 : 2SA992 (F E)
Q27,28 : 2SC1845 (F E)
Q29,30 : 2SC1735
Q31,32 : 2SA850
Q41,42 : 2SB724
Q43,44 : 2SD762

D1,2,21,22 : SV-22
D3~6 : EQA01-1 (R1)
D7~10 : EQB01-13
D11,12 : EQA01-15
D13,14 : EQA01-10 (R)
D15~20,27 : IS2076
D23~26 : EQA01-05 (T2)
D28,29 : RB-151

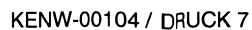
E31-1561-05

PC BOARD

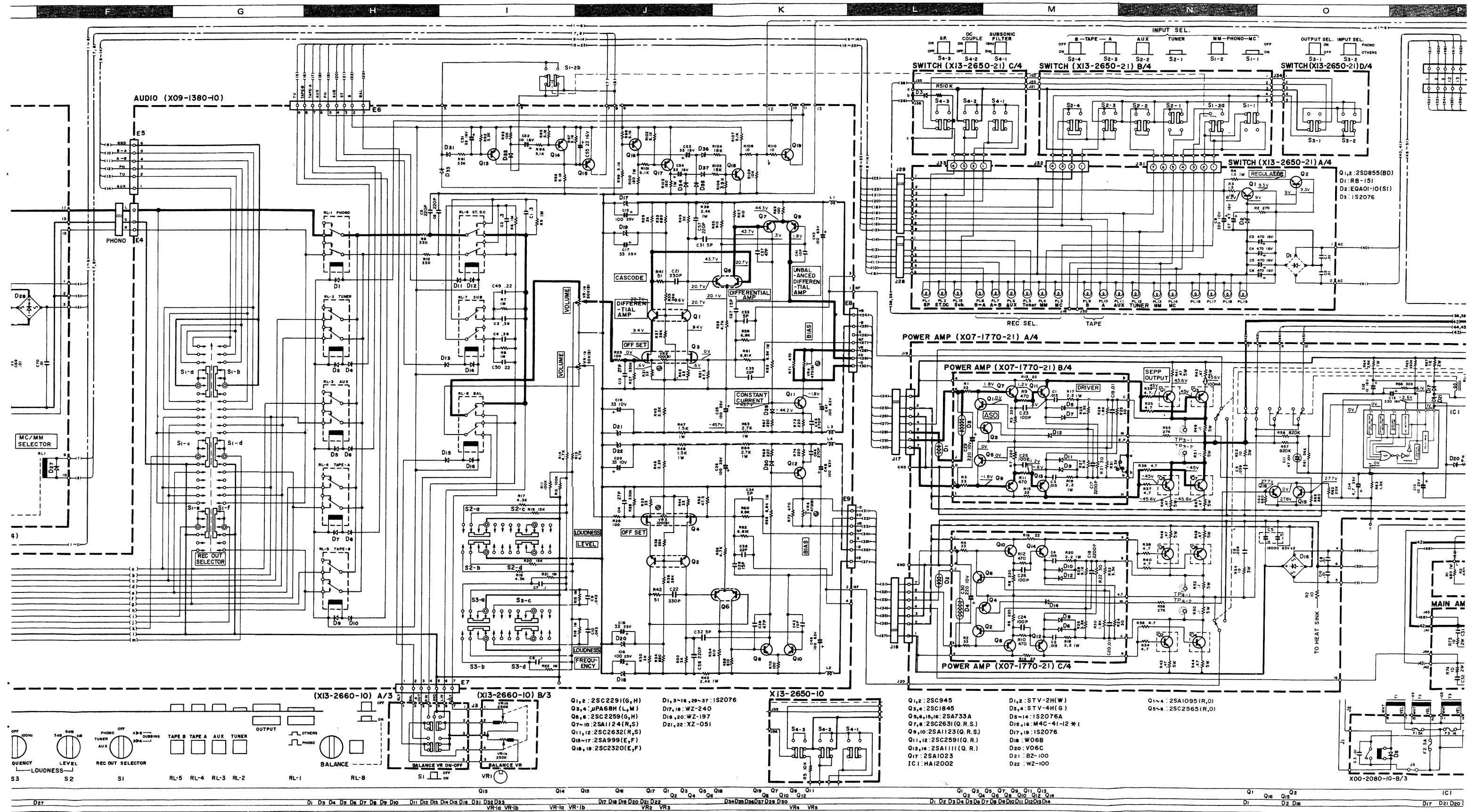
▼AUDIO (X09-1380-10) (Components side view)

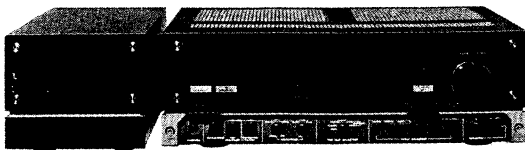
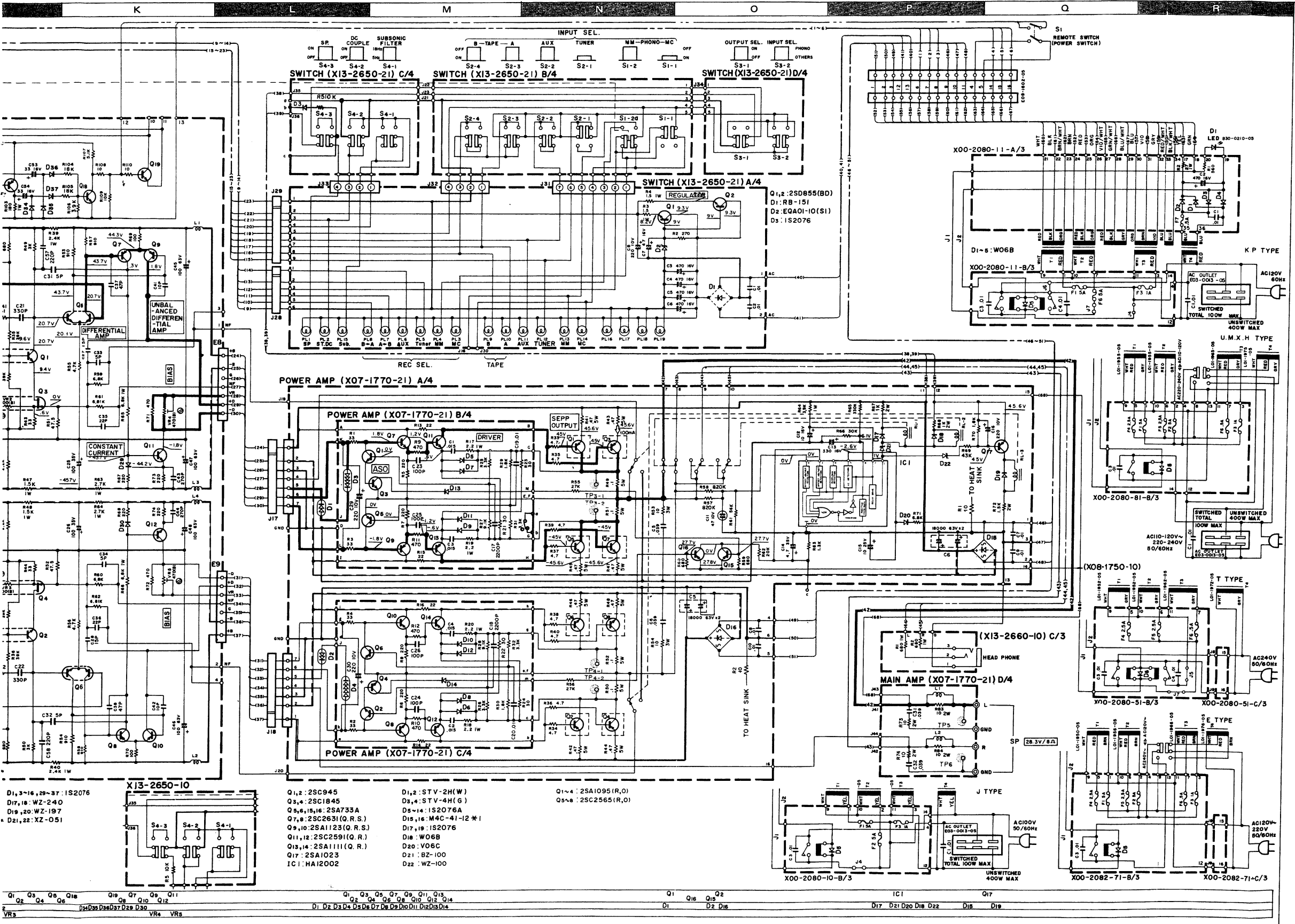


- Q1, 2 : 2SC2291 (G, H)
Q3, 4 : μPA68H (L, M)
Q5, 6 : 2SC2259 (G, H)
Q7~10 : 2SA1124 (R, S)
Q11, 12 : 2SC2632 (R, S)
Q13~17 : 2SA999 (E, F)
Q18, 19 : 2SC2320 (E, F)
- D1, 3~16, 29~37 : 1S2076
D17, 18 : WZ-240
D19, 20 : WZ-197
D21, 22 : XZ-051



NEW SEPARATE AMPLIFIER





SPECIFICATIONS

| | |
|---|---|
| POWER OUTPUT | |
| 110 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.006% total harmonic distortion. | |
| Both Channels Driven..... | 120 + 120 watts 8 ohms at 1,000 Hz |
| | 170 + 170 watts 4 ohms at 1,000 Hz |
| Total Harmonic Distortion (20 Hz to 20,000 Hz) | |
| AUX input to SPEAKER output..... | 0.006% at rated power into 8 ohms |
| PHONO input to SPEAKER output..... | 0.008% at rated power with VOLUME -20 dB |
| Intermodulation Distortion..... | 0.003% at rated power into 8 ohms |
| (60 Hz: 7 kHz = 4:1) | |
| Damping Factor..... | 1000, 1,000 Hz into 8 ohms |
| Transient Response | |
| Rise Time..... | 0.7 μs |
| Slew Rate..... | ± 150 V/μs |
| Power Bandwidth..... | 5 Hz to 100 kHz at 0.03% THD |
| Frequency Response (DC COUPLED at ON)..... | DC to 400 kHz, -3 dB |
| (DC COUPLED at OFF)..... | 5 Hz or 18 Hz to 400 kHz, -3 dB |
| Speaker Impedance | |
| Input Sensitivity/Impedance | Accepts 4 ohms to 16 ohms |
| Phono (MM)..... | 2.5 mV/50 kohms |
| Phono (MC)..... | 0.1 mV/100 kohms |
| Tuner, Aux, Tape Play..... | 200 mV/50 kohms |
| Signal to Noise Ratio (IHF: A) | |
| Phono (MM)..... | 90 dB for 2.5 mV input |
| | 96 dB for 5.0 mV input |
| Phono (MC)..... | 72 dB for 0.1 mV input |
| Tuner, AUX, Tape..... | 112 dB for 200 mV input |
| Maximum Input Level for Phono (MM)..... | 250 mV (RMS), THD 0.01% at 1,000 Hz |
| (MC)..... | 9 mV (RMS), THD 0.01% at 1,000 Hz |
| Output Level/Impedance | |
| Tape REC (Pin)..... | 200 mV/180 kohms |
| (DIN)..... | 40 mV/80 kohms |
| Frequency Response for Phono..... | RIAA standard curve ± 0.2 dB |
| (20 Hz to 20,000 Hz) | |
| Loudness Control..... | +3 dB, +6 dB, +9 dB at 30 Hz and 100 Hz |
| (at -30 dB VOLUME Level) | |
| Subsonic Filter (DC COUPLED at OFF)..... | -6 dB/Oct at 5 Hz and 18 Hz |
| GENERAL | |
| Power Consumption..... | 5.5A UL/CSA |
| | 430 watts, Rated power at 8 ohms |
| AC Outlet..... | 115 watts, Non signal |
| Dimensions | Switched 2, Unswitched 1 |
| | Amplifier (L-01A) Power Supply (L-01A-PS) |
| | W 440 mm (17-5/16") W 170 mm (6-11/16") |
| | H 156 mm (6-5/32") H 156 mm (6-5/32") |
| | D 452 mm (17-25/32") D 403.5 mm (15-7/8") |
| Net Weight..... | 9.5 kg (20.9 lb) 17.5 kg (38.5 lb) |

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

PARTS LIST

PARTS LIST

INSTRUCTION FOR PARTS LIST

| Ref. No. | Parts No. | Description | Re- marks |
|----------|-------------|-------------------------|--------------|
| 参照番号 | 部品番号 | 部品名 / 規格 | 備考 |
| ② | ① | ③ | ④ |
| 14 3A | A20-1391-13 | FRONT PANEL ASSY | + |
| 14 3A | A20-1417-13 | FRONT PANEL ASSY | + |
| 15 3A | A21-0302-03 | DRESSING PANEL | + |
| 15 3A | A21-0302-03 | DRESSING PANEL | + |
| 15 3A | A21-0302-03 | DRESSING PANEL | + |
| ⑤ | ⑥ | ⑦ | ⑧ |
| C1 C2 | C54-3310-39 | CERAMIC 0.01UF P | ET |
| C1 | C90-0145-05 | POLYESTER 0.01UF AC125V | I |
| C1 | C91-0023-05 | CERAMIC 0.01UF AC250V | UM |
| C1 | C91-0023-05 | CERAMIC 0.01UF AC250V | HX |
| C1 | C91-0025-05 | CERAMIC 0.01UF AC125V | P |

- ① Exploded view drawing No.
② Position in exploded view.
③ Symbol of new parts
④ Area to which parts are shipped. Example: A20-1390-13 is the part No. of FRONT PANEL ASS'Y for the "K" type products (for U.S.A.). When this column is blank, it means that the same type of parts (same parts No.) are used for the products shipped to all areas.
⑤ Reference No. in schematic diagram.
⑥ Abbreviation of "ceramic capacitor".
All capacitors and resistors are listed using abbreviations.
Abbreviations
* Abbreviations of capacitors (Parts No. with initial letter "C").
ELECTRO Electrolytic capacitor
LL-ELEC Low leak electrolytic capacitor
NP-ELEC Non-pole electrolytic capacitor
MICA Mica capacitor
POLYSTY Polystyrene capacitor
MYLAR Mylar capacitor
CERAMIC Ceramic capacitor
TANTAL Tantalum capacitor
MF Metallized film capacitor
MP Metallized paper capacitor
OIL Oil capacitor
The unit "UF" is used in lieu of "μF".
* Abbreviations of resistors (Parts No. with initial letters "R").
RC Carbon composition resistor
RD Carbon film resistor
FL-PROOF RD Flame-proof carbon film resistor
RW Wire wound power resistor
FL-PROOF RS Flame-proof metal oxide film resistor
RN Metal film resistor
FUSE-RESIST Resistor with fuse function
2B Rated wattage 1/8W
2E Rated wattage 1/4W
2H Rated wattage 1/2W
3A Rated wattage 1W
3D Rated wattage 2W
3F Rated wattage 3W
3G Rated wattage 4W
3H Rated wattage 5W
All resistor values are indicated with the unit (Ω) omitted.
* Abbreviations common to capacitors and resistors.
C ±0.25pF (Used for capacitors only)
D ±0.5pF (Used for capacitors only)
F ±1%
G ±2%
J ±5%
K ±10%
M ±20%
Z +80%, -20%(Used for capacitors only)
P +100%, -0%(Used for capacitors only)
Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

| Ref. No. | Parts No. | Description | Re- marks |
|----------------------|-------------|------------------------|--------------|
| 参照番号 | 部品番号 | 部品名 / 規格 | 備考 |
| L-01A AMPLIFIER UNIT | | | |
| 1 1A | - | MESH PLATE (A) | |
| 2 1B | - | MESH PLATE (B) | |
| 3 3C | - | METALLIC FRAME(L) | |
| 4 3C | - | METALLIC FRAME(R) | |
| 5 2A | - | ESCUTCHEON | |
| 6 2A | - | SUB PANEL (A) | |
| 7 2B | - | SUB PANEL (B) | |
| 8 1D | - | REAR PANEL | |
| 9 2B | - | BOTTOM PLATE | |
| 10 1C,3C | - | L SHAPED HARDWARE | |
| 11 2B | - | MESH PLATE | |
| 14 2C,2D | - | MOUNTING HARDWARE | |
| 15 1B | A03-0248-01 | WOODEN CABINET | *K |
| 15 1B | A03-0251-01 | WOODEN CABINET | PU |
| 15 1B | A03-0251-01 | WOODEN CABINET | MX |
| 15 1B | A03-0251-01 | WOODEN CABINET | TE |
| 16 3A | A20-1551-03 | FRONT PANEL | *K |
| 16 3A | A20-1551-03 | FRONT PANEL | PU |
| 16 3A | A20-1551-03 | FRONT PANEL | MX |
| 16 3A | A20-1552-03 | FRONT PANEL | E |
| 17 2A | A21-0314-02 | DRESSING PANEL | T |
| 18 1C | A50-0074-02 | SIDE PLATE (L) | * |
| 19 3D | A50-0075-02 | SIDE PLATE (R) | * |
| - | B46-0055-20 | WARRANTY CARD | P |
| - | B46-0060-00 | WARRANTY CARD | T |
| - | B46-0061-20 | WARRANTY CARD | K |
| - | B46-0062-20 | WARRANTY CARD | U |
| - | B46-0063-13 | WARRANTY CARD | U |
| - | B46-0064-10 | WARRANTY CARD | X |
| - | B50-3067-00 | INSTRUCTION MANUAL | *K |
| - | B50-3067-00 | INSTRUCTION MANUAL | U |
| - | B50-3068-00 | INSTRUCTION MANUAL | PM |
| - | B50-3068-00 | INSTRUCTION MANUAL | X |
| - | B50-3069-00 | INSTRUCTION MANUAL | T |
| - | B50-3082-00 | INSTRUCTION MANUAL | E |
| - | B59-0018-00 | SERVICE STATIONS' LIST | U |
| 20 3B | B07-0249-04 | ESCUTCHEON | * |
| 21 2A | B08-0010-04 | INDICATOR | * |
| 22 3A | B10-0266-03 | FRONT GLASS | * |
| 43 3A | B09-0015-04 | CAP | * |
| C5 ,6 | C90-0419-15 | ELECTRO 18000UFx2 63WV | * |
| 23 2B | D21-0455-05 | SHAFT | * |
| 24 2B,3D | D22-0036-04 | COUPLING (A) | * |
| 25 3D | D22-0037-04 | COUPLING (B) | * |
| - | E14-0107-05 | PHONO PLUG | * |
| 26 1D | E09-1603-05 | RECTANGULAR PLUG 16P | * |
| 27 1D | E21-0011-05 | GND TERMINAL | * |
| 12 3D | F01-0331-15 | HEAT SINK ASSY (L) | * |
| 13 2D | F01-0332-15 | HEAT SINK ASSY (R) | * |
| 28 1C | G13-0122-05 | CUSHION (L) | * |
| 29 1D | G13-0123-05 | CUSHION (R) | * |
| - | H01-3099-14 | CARTON BOX | *T |
| - | H01-3102-14 | CARTON BOX | E |
| - | H01-3150-04 | CARTON BOX | KP |
| - | H01-3150-04 | CARTON BOX | UM |
| - | H01-3150-04 | CARTON BOX | X |

| Ref. No. | Parts No. | Description | Re- marks | Ref. No. | Parts No. | Description | Re- marks |
|-------------------------|-------------|------------------------|--------------|----------------------|-------------|---------------------|--------------|
| 参照番号 | 部品番号 | 部品名 / 規格 | 備考 | 参照番号 | 部品番号 | 部品名 / 規格 | 備考 |
| - | H12-0073-03 | PACKING FIXTURE | * | C31 ,32 | C49-2039-35 | POLYSTY 0.039UF | |
| - | H12-0074-04 | PACKING FIXTURE | * | 101 1D | E20-0444-05 | SPEAKER TERMINAL | |
| - | H12-0075-04 | PACKING FIXTURE | * | L1 ,2 | L39-0082-05 | COIL | |
| - | H20-0458-04 | COVER | KP | R1 -4 | R43-1233-05 | FL-PROOF RD33 | |
| - | H20-0458-04 | COVER | UX | R5 -8 | R43-1222-15 | FL-PROOF RD220 | |
| - | H20-0458-04 | COVER | TE | R9 -12 | R43-1247-15 | FL-PROOF RD470 | |
| - | H20-0458-04 | COVER | M | R13 -16 | R43-1222-05 | FL-PROOF RD22 | |
| - | H20-0458-04 | COVER | | R17 -20 | R47-5422-95 | FL-PROOF RS2,2 | |
| - | H20-0458-04 | COVER | | R21 -24 | R43-1230-05 | FL-PROOF RD30 | |
| 30 3B | J02-0098-04 | FOOT | * | R33 -40 | R43-1247-95 | FL-PROOF RD4,7 | |
| 31 3A | K21-0381-04 | KNOB(VOLUME) | * | R41 -48 | R92-0203-05 | METAL 0,47 | |
| 32 2B | K21-0382-04 | KNOB(LOUD,REC,BALANCE) | * | R49 -52 | R92-0202-05 | METAL 0,1 | |
| 33 2B | K27-0114-03 | KNOB(OUTPUT,INPUT) | * | R53 ,54 | R47-5610-05 | FL-PROOF RS10 | |
| 34 2B | K27-0115-03 | KNOB(POWER) | * | R64 | R47-5439-25 | FL-PROOF RS3,9K | |
| 35 2A,2B | K27-0116-04 | KNOB(PUSHBUTTON)X5 | * | R67 ,68 | R47-5510-25 | FL-PROOF RS1K | |
| 36 2B | K27-0117-04 | KNOB(SELECTOR,BALANCE) | * | R72 | R47-5515-25 | FL-PROOF RS1,5K | |
| 37 1B | N09-0323-04 | SCREW | | R73 ,74 | R47-5510-05 | FL-PROOF RS10 | |
| 38 3A | N09-0324-04 | SCREW | | R83 ,84 | R47-5510-05 | FL-PROOF RS10 | |
| 38 3A | N30-4008-45 | PAN HEAD MACHINE SCREW | | - | S59-1048-05 | THERMAL SWITCH | |
| 39 1A | N09-0291-05 | SCREW | | - | S59-1048-05 | THERMAL SWITCH | |
| 40 2C,2D | N09-0326-05 | SCREW | * | - | S59-1048-05 | THERMAL SWITCH | |
| 41 1D | N09-0327-05 | SCREW | | RL1 | S51-2041-05 | RELAY | |
| 42 3B,1D | N14-0115-05 | NUT | | RL2 | S51-2040-05 | RELAY | |
| 43 3A | N14-0124-04 | SPECIAL NUT | | RL3 | S51-2041-05 | RELAY | |
| 44 2D | S90-0032-05 | REMOTE SWITCH SHAFT | * | D1 ,2 | V11-5100-80 | STV-2H(W) | |
| 45 2D | S90-0033-05 | REMOTE SWITCH SHAFT | * | D3 ,4 | V11-5100-40 | STV-4H(G) | |
| S1 | S40-2103-15 | PUSH SWITCH FIG46 | * | D5 -14 | V11-0273-05 | 1S2076A | |
| Q1 -4 | V01-1095-10 | 2SA1095(R,O) FIG47 | * | D15 ,16 | V11-2101-20 | M4C-41-12*1 | |
| Q5 -8 | V03-2565-10 | 2SC2565(R,O) FIG48 | * | D17 | V11-0271-05 | 1S2076 | |
| - | W01-0077-15 | WRENCH | | D18 | V11-0295-05 | W06B | |
| - | W01-0090-05 | CLEANING CLOTH | | D19 | V11-0271-05 | 1S2076 | |
| 49 1C,2D | X07-1770-10 | POWER AMP PCB ASSY | *T | D20 | V11-0200-05 | V06C | |
| 49 1C,2D | X07-1770-10 | POWER AMP PCB ASSY | E | D21 | V11-9727-05 | BZ-100 | |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | KP | D22 | V11-0247-05 | WZ-100 | |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | UM | IC1 | V30-0291-10 | HA12002 | |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | X | Q1 ,2 | V03-0297-05 | 2SC945 | |
| 50 3D | X08-1750-10 | PRE AMP PCB ASSY | * | Q3 ,4 | V03-1845-00 | 2SC1845 | |
| 51 2D | X09-1380-10 | AUDIO AMP PCB ASSY | * | Q5 ,6 | V01-0733-90 | 2SA733(A) | |
| 52 2A,1B | X13-2650-10 | SWITCH PCB ASSY | *T | Q7 ,8 | V03-2631-10 | 2SC2631(Q,R,S) | |
| 52 2A,1B | X13-2650-10 | SWITCH PCB ASSY | E | Q9 ,10 | V01-1123-10 | 2SA1123(Q,R,S) | |
| 52 2A,1B | X13-2650-21 | SWITCH PCB ASSY | KP | Q11 ,12 | V03-2591-10 | 2SC2591(Q,R) FIG102 | |
| 52 2A,1B | X13-2650-21 | SWITCH PCB ASSY | UM | Q13 ,14 | V01-1111-10 | 2SA1111(Q,R) FIG103 | |
| 53 2B | X13-2660-10 | SUB PCB ASSY | X | Q15 ,16 | V01-0733-90 | 2SA733(A) | |
| POWER AMP (X07-1770-xx) | | | | Q17 | V01-1023-00 | 2SA1023 | |
| C1 -4 | C49-2015-35 | POLYSTY 0.015UF J | | PREAMP (X08-1750-10) | | | |
| C5 ,6 | C49-2039-35 | POLYSTY 0.039UF J | | C1 -4 | C90-0452-05 | ELECTRO 100UF | 6 |
| C7 -10 | C54-2710-39 | CERAMIC 0.01UF P | | C5 ,6 | C91-0062-05 | POLYSTY 100PF | K |
| C11 | C90-0458-05 | ELECTRO 47UF 10WV | | C7 -10 | C90-0461-05 | ELECTRO 2,2UF | 50 |
| C12 | C24-1210-61 | ELECTRO 10UF 16WV | | C11 -14 | C91-0090-05 | POLYSTY 150PF | J |
| C13 | C25-1233-77 | ELECTRO 330UF 16WV | | C15 -18 | C90-0451-05 | ELECTRO 220UF | 10 |
| C14 | C24-1747-51 | ELECTRO 4,7UF 35WV | | C19 ,20 | C90-0463-05 | ELECTRO 2,2UF | 35 |
| C15 | C24-1410-61 | ELECTRO 10UF 25WV | | C21 ,22 | C90-0407-05 | ELECTRO 220UF | 16 |
| C16 | C24-1022-71 | ELECTRO 220UF 10WV | | C23 ,24 | C90-0462-05 | ELECTRO 330UF | 16 |
| C17 ,18 | C49-2022-25 | POLYSTY 2200PF J | | C25 -28 | C90-0400-05 | ELECTRO 100UF | 25 |
| C19 ,20 | C49-2010-34 | MYLAR 0.01UF G | | C29 ,30 | C90-0442-05 | ELECTRO 100UF | 16 |
| C23 -26 | C71-1710-15 | CERAMIC 100PF J | | C31 ,32 | C91-0092-05 | POLYSTY 220PF | J |
| C29 ,30 | C90-0451-05 | ELECTRO 220UF 10WV | | C33 ,34 | C91-0100-05 | POLYSTY 1000PF | J |
| | | | | C35 ,36 | C91-0061-05 | POLYSTY 82PF | K |
| | | | | C39 ,40 | C49-2018-43 | POLYSTY 0.18UF | J |
| | | | | C41 ,42 | C49-2051-33 | POLYSTY 0.051UF | J |

PARTS LIST

| ption / 规格 | Re- marks 備考 |
|-------------------------------|----------------------------|
| WARE | |
| WARE | |
| T T T | *K PU MX TE *K |
| | PU MX E T * |
| | * P T K U U |
| N UAL UAL UAL UAL | X *K U PM X |
| N UAL UAL NS' LIST | T E U |
| | * |
| FX2 63WV | * |
| | * |
| JG 16P | * |
| (L) (R) | * |
| | * |
| | *T E KP UM X |

| Ref. No. 参照番号 | Parts No. 部品番号 | Description 部品名 / 規格 | Re- marks 備考 |
|-------------------------|-------------------|-------------------------|--------------------|
| - | H12-0073-03 | PACKING FIXTURE | * |
| - | H12-0074-04 | PACKING FIXTURE | * |
| - | H12-0075-04 | PACKING FIXTURE | * |
| - | H20-0458-04 | COVER | KP |
| - | H20-0458-04 | COVER | UX |
| - | H20-0458-04 | COVER | TE |
| - | H20-0459-04 | COVER | M |
| - | H25-0029-04 | BAG | |
| - | H25-0078-04 | BAG | |
| - | H40-0004-04 | ANTI-RUST PAPER | |
| 30 3B | J02-0098-04 | FOOT | |
| 31 3A | K21-0381-04 | KNOB(VOLUME) | * |
| 32 2B | K21-0382-04 | KNOB(LOUD,REC,BALANCE) | * |
| 33 2B | K27-0114-03 | KNOB(OUTPUT,INPUT) | * |
| 34 2B | K27-0115-03 | KNOB(POWER) | * |
| 35 2A,2B | K27-0116-04 | KNOB(PUSHBUTTON)X5 | * |
| 36 2B | K27-0117-04 | KNOB(SELECTOR,BALANCE) | * |
| 37 1B | N09-0323-04 | SCREW | |
| 38 3A | N09-0324-04 | SCREW | |
| 38 3A | N30-4008-45 | PAN HEAD MACHINE SCREW | |
| 39 1A | N09-0291-05 | SCREW | |
| 40 2C,2D | N09-0326-05 | SCREW | * |
| 41 1D | N09-0327-05 | SCREW | |
| 42 3B,1D | N14-0115-05 | NUT | |
| 43 3A | N14-0124-04 | SPECIAL NUT | |
| 44 2D | S90-0032-05 | REMOTE SWITCH SHAFT | * |
| 45 2D | S90-0033-05 | REMOTE SWITCH SHAFT | * |
| S1 | S40-2103-15 | PUSH SWITCH FIG46 | * |
| Q1 -4 | V01-1095-10 | 2SA1095(R,O) FIG47 | * |
| Q5 -8 | V03-2565-10 | 2SC2565(R,O) FIG48 | * |
| - | W01-0077-15 | WRENCH | |
| - | W01-0090-05 | CLEANING CLOTH | |
| 49 1C,2D | X07-1770-10 | POWER AMP PCB ASSY | *T |
| 49 1C,2D | X07-1770-10 | POWER AMP PCB ASSY | E |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | KP |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | UM |
| 49 1C,2D | X07-1770-21 | POWER AMP PCB ASSY | X |
| 50 3D | X08-1750-10 | PRE AMP PCB ASSY | * |
| 51 2D | X09-1380-10 | AUDIO AMP PCB ASSY | * |
| 52 2A,1B | X13-2650-10 | SWITCH PCB ASSY | *T |
| 52 2A,1B | X13-2650-10 | SWITCH PCB ASSY | E |
| 52 2A,1B | X13-2650-21 | SWITCH PCB ASSY | KP |
| 52 2A,1B | X13-2650-21 | SWITCH PCB ASSY | UM |
| 52 2A,1B | X13-2650-21 | SWITCH PCB ASSY | X |
| 53 2B | X13-2660-10 | SUB PCB ASSY | * |
| POWER AMP (X07-1770-xx) | | | |
| C1 -4 | C49-2015-35 | POLYSTY 0.015UF J | |
| C5 -6 | C49-2039-35 | POLYSTY 0.039UF J | |
| C7 -10 | C54-2710-39 | CERAMIC 0.01UF P | |
| C11 | C90-0458-05 | ELECTRO 47UF 10WV | |
| C12 | C24-1210-61 | ELECTRO 10UF 16WV | |
| C13 | C25-1233-77 | ELECTRO 330UF 16WV | |
| C14 | C24-1747-51 | ELECTRO 4.7UF 35WV | |
| C15 | C24-1410-61 | ELECTRO 10UF 25WV | |
| C16 | C24-1022-71 | ELECTRO 220UF 10WV | |
| C17 ,18 | C49-2022-25 | POLYSTY 2200PF J | |
| C19 ,20 | C49-2010-34 | MYLAR 0.01UF G | |
| C23 -26 | C71-1710-15 | CERAMIC 100PF J | |
| C29 ,30 | C90-0451-05 | ELECTRO 220UF 10WV | |

| Ref. No. 参照番号 | Parts No. 部品番号 | Description 部品名 / 規格 | Re- marks 備考 |
|----------------------|-------------------|-------------------------|--------------------|
| C31 ,32 | C49-2039-35 | POLYSTY 0.039UF J | |
| 101 1D | E20-0444-05 | SPEAKER TERMINAL | * |
| L1 ,2 | L39-0082-05 | COIL | |
| R1 -4 | R43-1233-05 | FL-PROOF RD33 J 2E | |
| R5 -8 | R43-1222-15 | FL-PROOF RD220 J 2E | |
| R9 -12 | R43-1247-15 | FL-PROOF RD470 J 2E | |
| R13 -16 | R43-1222-05 | FL-PROOF RD22 J 2E | |
| R17 -20 | R47-5422-95 | FL-PROOF RS2,2 J 3A | |
| R21 -24 | R43-1230-05 | FL-PROOF RD30 J 2E | |
| R33 -40 | R43-1247-95 | FL-PROOF RD4,7 J 2E | |
| R41 -48 | R92-0203-05 | METAL 0,47 K 3H | |
| R49 -52 | R92-0202-05 | METAL 0,1 K 3H | |
| R53 ,54 | R47-5610-05 | FL-PROOF RS10 J 3F | |
| R64 | R47-5439-25 | FL-PROOF RS3,9K J 3A | |
| R67 ,68 | R47-5510-25 | FL-PROOF RS1K J 3D | |
| R72 | R47-5515-25 | FL-PROOF RS1,5K J 3D | |
| R73 ,74 | R47-5510-05 | FL-PROOF RS10 J 3D | |
| R83 ,84 | R47-5510-05 | FL-PROOF RS10 J 3D | |
| - | S59-1048-05 | THERMAL SWITCH | KP |
| - | S59-1048-05 | THERMAL SWITCH | UM |
| - | S59-1048-05 | THERMAL SWITCH | X |
| RL1 | S51-2041-05 | RELAY | * |
| RL2 | S51-2040-05 | RELAY | |
| RL3 | S51-2041-05 | RELAY | * |
| D1 ,2 | V11-5100-80 | STV-2H(W) | |
| D3 ,4 | V11-5100-40 | STV-4H(G) | |
| D5 -14 | V11-0273-05 | 1S2076A | |
| D15 ,16 | V11-2101-20 | M4C-41-12*1 | |
| D17 | V11-0271-05 | 1S2076 | |
| D18 | V11-0295-05 | W068 | |
| D19 | V11-0271-05 | 1S2076 | |
| D20 | V11-0200-05 | V06C | |
| D21 | V11-9727-05 | BZ-100 | |
| D22 | V11-0247-05 | WZ-100 | |
| IC1 | V30-0291-10 | HA12002 | |
| Q1 ,2 | V03-0297-05 | 2SC945 | |
| Q3 ,4 | V03-1845-00 | 2SC1845 | |
| Q5 ,6 | V01-0733-90 | 2SA733(A) | |
| Q7 ,8 | V03-2631-10 | 2SC2631(Q,R,S) | * |
| Q9 ,10 | V01-1123-10 | 2SA1123(Q,R,S) | * |
| Q11 ,12 | V03-2591-10 | 2SC2591(Q,R) FIG102 | * |
| Q13 ,14 | V01-1111-10 | 2SA1111(Q,R) FIG103 | * |
| Q15 ,16 | V01-0733-90 | 2SA733(A) | |
| Q17 | V01-1023-00 | 2SA1023 | |
| PREAMP (X08-1750-10) | | | |
| C1 -4 | C90-0452-05 | ELECTRO 100UF 6.3WV | * |
| C5 -6 | C91-0062-05 | POLYSTY 100PF K | * |
| C7 -10 | C90-0461-05 | ELECTRO 2,2UF 50WV | * |
| C11 -14 | C91-0090-05 | POLYSTY 150PF J | * |
| C15 -18 | C90-0451-05 | ELECTRO 220UF 10WV | * |
| C19 ,20 | C90-0463-05 | ELECTRO 2,2UF 35WV | * |
| C21 ,22 | C90-0407-05 | ELECTRO 220UF 16WV | * |
| C23 ,24 | C90-0462-05 | ELECTRO 330UF 16WV | * |
| C25 -28 | C90-0400-05 | ELECTRO 100UF 25WV | * |
| C29 ,30 | C90-0442-05 | ELECTRO 100UF 16WV | * |
| C31 ,32 | C91-0092-05 | POLYSTY 220PF J | * |
| C33 ,34 | C91-0100-05 | POLYSTY 1000PF J | * |
| C35 ,36 | C91-0061-05 | POLYSTY 82PF K | * |
| C39 ,40 | C49-2018-43 | POLYSTY 0.18UF J | * |
| C41 ,42 | C49-2051-33 | POLYSTY 0.051UF J | * |

PARTS LIST

| Ref. No. 参照番号 | Parts No. 部品番号 | Description 部品名 / 規格 | Re- marks 備考 |
|------------------|-------------------|-------------------------|--------------------|
| C43 ,44 | C91-0103-05 | POLYSTY 2200PF J | |
| C45 ,46 | C91-0091-05 | POLYSTY 180PF J | * |
| C47 ,48 | C90-0450-05 | ELECTRO 220UF 6,3WV | * |
| C49 ,50 | C90-0454-05 | ELECTRO 4,7UF 35WV | * |
| C51 ,52 | C90-0460-05 | ELECTRO 47UF 10WV | * |
| C53 ,54 | C91-0100-05 | POLYSTY 1000PF J | * |
| C55 ,56 | C90-0397-05 | ELECTRO 100UF 35WV | * |
| C57 ,58 | C90-0456-05 | ELECTRO 47UF 35WV | * |
| C59 -62 | C90-0425-05 | ELECTRO 100UF 10WV | * |
| C63 -66 | C90-0456-05 | ELECTRO 47UF 35WV | * |
| C67 ,68 | C90-0449-05 | ELECTRO 1700UF 42WV | * |
| C69 ,70 | C54-2710-39 | CERAMIC 0,01UF P | |
| C71 ,72 | C90-0420-05 | ELECTRO 2200UF 25WV | |
| C73 ,74 | C54-2710-39 | CERAMIC 0,01UF P | |
| C75 ,76 | C91-0100-05 | POLYSTY 1000PF J | * |
| 201 3D | E13-0426-05 | PHONO JACK | * |
| L1 -4 | L33-0275-05 | CHOCK COIL | |
| R1 ,2 | R48-2210-15 | RN 100 J 2E | |
| R15 ,16 | R48-6251-15 | RN 510 J 2E | |
| R17 ,18 | R48-2210-05 | RN 10 J 2E | |
| R29 ,30 | R48-6256-05 | RN 56 J 2E | |
| R31 -34 | R43-1210-05 | FL-PROOF RD10 J 2E | |
| R35 ,36 | R48-2236-35 | RN 36K J 2E | |
| R37 -40 | R43-1212-15 | FL-PROOF RD120 J 2E | |
| R41 -44 | R47-5412-15 | FL-PROOF RS120 J 3A | |
| R45 ,46 | R43-1268-25 | FL-PROOF RD6,8K J 2E | |
| R49 ,50 | R48-2251-35 | RN 51K J 2E | |
| R69 ,70 | R48-2243-93 | RN 24,3 F 2E | |
| R73 ,74 | R47-5410-25 | FL-PROOF RS1K J 3A | |
| R75 ,76 | R48-2147-13 | RN 1,47K F 2E | |
| R77 ,78 | R48-2178-23 | RN 17,8K F 2E | |
| R89 -92 | R47-5410-05 | FL-PROOF RS10 J 3A | |
| R93 ,94 | R48-2215-35 | RN 15K J 2E | |
| R95 ,96 | R48-6227-15 | RN 270 J 2E | |
| R113-116 | R47-5512-15 | FL-PROOF RS120 J 3D | |
| R121,122 | R48-6227-15 | RN 270 J 2E | |
| VR1 ,2 | R12-0502-05 | TRIMMING POT 100 OFFSET | |
| RL1 | S51-2039-05 | RELAY | |
| D1 ,2 | V11-2200-10 | SV-22 | |
| D3 -6 | V11-7101-60 | EQA01-11(R1) | |
| D7 -10 | V11-9994-05 | EQB01-13 | |
| D11 ,12 | V11-0375-05 | EQA01-15 | |
| D13 ,14 | V11-7101-50 | EQA01-10(R) | |
| D15 -20 | V11-0271-05 | 1S2076 | |
| D21 ,22 | V11-2200-10 | SV-22 | |
| D23 -26 | V11-7101-40 | EQA01-05(T2) | |
| D27 | V11-0271-05 | 1S2076 | |
| D28 ,29 | V11-5100-60 | RB-151 | |
| Q1 ,2 | V03-2545-10 | 2SC2545(D,E) | * |
| Q3 ,4 | V01-1083-10 | 2SA1083(D,E) | * |
| Q5 ,6 | V01-0999-10 | 2SA999(E,F) | * |
| Q7 ,8 | V03-2320-10 | 2SC2320(E,F) | * |
| Q9 ,10 | V03-2003-20 | 2SC2003(M,L) | * |
| Q11 ,12 | V01-0954-20 | 2SA954(M,L) | |
| Q13 ,14 | V09-0141-00 | 2SK146 | |
| Q15 ,16 | V03-2291-20 | 2SC2291(F,G) | |
| Q17 ,18 | V01-0995-10 | 2SA995(F,G) | |
| Q19 ,20 | V03-2320-10 | 2SC2320(E,F) | |
| Q21 -24 | V01-0999-10 | 2SA999(E,F) | |
| Q25 ,26 | V01-0992-10 | 2SA992(F,E) | |

| Ref. No. 参照番号 | Parts No. 部品番号 | Description 部品名 / 規格 | Re- marks 備考 |
|---------------------|-------------------|-------------------------|--------------------|
| Q27 ,28 | V03-1845-10 | 2SC1845(F,E) | |
| Q29 ,30 | V03-0452-05 | 2SC1735 | |
| Q31 ,32 | V01-0173-05 | 2SA850 | |
| Q33 ,34 | V03-2320-10 | 2SC2320(E,F) | |
| Q35 -38 | V01-0999-10 | 2SA999(E,F) | |
| Q39 ,40 | V03-2320-10 | 2SC2320(E,F) | |
| Q41 ,42 | V02-0724-00 | 2SB724 | |
| Q43 ,44 | V04-0762-00 | 2SD762 | |
| AUDIO (X09-1380-10) | | | |
| C1 ,2 | C49-2030-45 | POLYSTY 0.3UF J | |
| C3 ,4 | C49-2039-45 | POLYSTY 0.39UF J | |
| C5 ,6 | C91-0092-05 | POLYSTY 220PF J | |
| C7 ,8 | C49-2010-45 | POLYSTY 0.1UF J | |
| C9 ,10 | C49-2043-35 | POLYSTY 0.043UF J | |
| C13 ,14 | C91-0055-05 | POLYSTY 27PF K | |
| C15 ,16 | C90-0429-05 | ELECTRO 100UF 25WV | |
| C17 ,18 | C90-0459-05 | ELECTRO 33UF 25WV | |
| C19 ,20 | C90-0464-05 | ELECTRO 33UF 10WV | |
| C21 ,22 | C91-0094-05 | POLYSTY 330PF J | |
| C25 ,26 | C90-0397-05 | ELECTRO 100UF 35WV | |
| C27 ,28 | C91-0052-05 | POLYSTY 15PF K | |
| C31 ,32 | C91-0048-05 | POLYSTY 5PF F | |
| C33 ,34 | C71-1705-01 | CERAMIC 5PF C | |
| C35 ,36 | C91-0054-05 | POLYSTY 22PF K | |
| C37 ,38 | C91-0058-05 | POLYSTY 47PF K | |
| C41 ,42 | C91-0050-05 | POLYSTY 10PF K | |
| C43 ,44 | C91-0093-05 | POLYSTY 270PF J | |
| C45 -48 | C90-0432-05 | ELECTRO 100UF 63WV | |
| C49 ,50 | C49-2022-45 | MYLAR 0,22UF J | |
| C51 -54 | C25-1433-67 | LL-ELEC 33UF 16WV | |
| C52 | C25-1210-67 | LL-ELEC 10UF 16WV | |
| C55 | C25-1222-67 | LL-ELEC 22UF 16WV | |
| C57 ,58 | C91-0092-05 | POLYSTY 220PF J | |
| 301 1D | E06-0514-05 | DIN CONNECTOR | |
| 302 2D | E13-0425-05 | PHONO JACK | |
| L1 -4 | L33-0275-05 | CHOCK COIL | |
| R1 ,2 | R48-2239-45 | RN 390K J 2E | |
| R3 ,4 | R48-6210-45 | RN 100K J 2E | |
| R9 ,10 | R48-2233-15 | RN 330 J 2E | |
| R11 ,12 | R48-6210-45 | RN 100K J 2E | |
| R13 ,14 | R48-6247-23 | RN 4,7K J 2E | |
| R17 ,18 | R48-6243-25 | RN 4,3K J 2E | |
| R19 ,20 | R48-2215-35 | RN 15K J 2E | |
| R25 ,26 | R48-2210-15 | RN 100 J 2E | |
| R27 ,28 | R48-2233-45 | RN 330K J 2E | |
| R29 ,30 | R48-2230-25 | RN 3K J 2E | |
| R31 ,32 | R48-6233-05 | RN 33 J 2E | |
| R33 ,34 | R48-6268-15 | RN 680 J 2E | |
| R35 -38 | R48-6239-35 | RN 39K J 2E | |
| R39 ,40 | R47-5424-25 | FL-PROOF RS2,4K J 3A | |
| R41 ,42 | R48-2251-05 | RN 51 J 2E | |
| R43 ,44 | R48-6233-05 | RN 33 J 2E | |
| R45 ,46 | R48-2222-25 | RN 2,2K J 2E | |
| R47 ,48 | R47-1415-25 | FL-PROOF RS1,5K J 3A | |
| R49 ,50 | R48-2230-25 | RN 3K J 2E | |
| R51 ,52 | R48-2475-93 | RN 47,5 F 2E | |
| R55 ,56 | R43-1247-25 | FL-PROOF RD4,7K J 2E | |
| R61 ,62 | R48-2681-13 | RN 6,81K F 2E | |
| R63 ,64 | R47-5427-25 | FL-PROOF RS2,7K J 3A | |
| R65 ,66 | R47-5468-25 | FL-PROOF RS6,8K J 3A | |
| R67 ,68 | R43-1222-15 | FL-PROOF RD220 J 2E | |

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|--|---|--|-----------------------|
| C43 ,44 C45 ,46 C47 ,48 C49 ,50 C51 ,52 | C91-0103-05 C91-0091-05 C90-0450-05 C90-0454-05 C90-0460-05 | POLYSTY 2200PF J POLYSTY 180PF J ELECTRO 220UF 6,3WV ELECTRO 4,7UF 35WV ELECTRO 47UF 10WV | * * * * * |
| C53 ,54 C55 ,56 C57 ,58 C59 ,62 C63 ,66 | C91-0100-05 C90-0397-05 C90-0456-05 C90-0425-05 C90-0456-05 | POLYSTY 1000PF J ELECTRO 100UF 35WV ELECTRO 47UF 35WV ELECTRO 100UF 10WV ELECTRO 47UF 35WV | * * * * * |
| C67 ,68 C69 ,70 C71 ,72 C73 ,74 C75 ,76 | C90-0449-05 C54-2710-39 C90-0420-05 C54-2710-39 C91-0100-05 | ELECTRO 1700UF 42WV CERAMIC 0,01UF P ELECTRO 2200UF 25WV CERAMIC 0,01UF P POLYSTY 1000PF J | * * * * * |
| 201 3D | E13-0426-05 | PHONO JACK | * |
| L1 -4 | L33-0275-05 | CHOCK COIL | * |
| R1 ,2 R15 ,16 R17 ,18 R29 ,30 R31 -34 | R48-2210-15 R48-6251-15 R48-2210-05 R48-6256-05 R43-1210-05 | RN 100 J 2E RN 510 J 2E RN 10 J 2E RN 56 J 2E FL-PROOF RD10 J 2E | * * * * * |
| R35 ,36 R37 -40 R41 -44 R45 ,46 R49 ,50 | R48-2236-35 R43-1212-15 R47-5412-15 R43-1268-25 R48-2251-35 | RN 36K J 2E FL-PROOF RD120 J 2E FL-PROOF RS120 J 3A FL-PROOF RD6,8K J 2E RN 51K J 2E | * * * * * |
| R69 ,70 R73 ,74 R75 ,76 R77 ,78 R89 -92 | R48-2243-93 R47-5410-25 R48-2147-13 R48-2178-23 R47-5410-05 | RN 24,3 F 2E FL-PROOF RS1K J 3A RN 1,47K F 2E RN 17,8K F 2E FL-PROOF RS10 J 3A | * * * * * |
| R93 ,94 R95 ,96 R113-116 R121,122 VR1 ,2 | R48-2215-35 R48-6227-15 R47-5512-15 R48-6227-15 R12-0502-05 | RN 15K J 2E RN 270 J 2E FL-PROOF RS120 J 3D RN 270 J 2E TRIMMING POT 100 OFFSET | * * * * * |
| RL1 | S51-2039-05 | RELAY | * |
| D1 ,2 D3 -6 D7 -10 D11 ,12 D13 ,14 | V11-2200-10 V11-7101-60 V11-9994-05 V11-0375-05 V11-7101-50 | SV-22 EQA01-11(R1) EQB01-13 EQA01-15 EQA01-10(R) | * * * * * |
| D15 -20 D21 ,22 D23 -26 D27 D28 ,29 | V11-0271-05 V11-2200-10 V11-7101-40 V11-0271-05 V11-5100-60 | 1S2076 SV-22 EQA01-05(T2) 1S2076 RB-151 | * * * * * |
| Q1 ,2 Q3 ,4 Q5 ,6 Q7 ,8 Q9 ,10 | V03-2545-10 V01-1083-10 V01-0999-10 V03-2320-10 V03-2003-20 | 2SC2545(D,E) 2SA1083(D,E) 2SA999(E,F) 2SC2320(E,F) 2SC2003(M,L) | * * * * * |
| Q11 ,12 Q13 ,14 Q15 ,16 Q17 ,18 Q19 ,20 | V01-0954-20 V09-0141-00 V03-2291-20 V01-0995-10 V03-2320-10 | 2SA954(M,L) 2SK146 2SC2291(F,G) 2SA995(F,G) 2SC2320(E,F) | * * * * * |
| Q21 -24 Q25 ,26 | V01-0999-10 V01-0992-10 | 2SA999(E,F) 2SA992(F,E) | * * |
| Q27 ,28 Q29 ,30 Q31 ,32 Q33 ,34 Q35 -38 | V03-1845-10 V03-0452-05 V01-0173-05 V03-2320-10 V01-0999-10 | 2SC1845(F,E) 2SC1735 2SA850 2SC2320(E,F) 2SA999(E,F) | * * * * * |
| Q39 ,40 Q41 ,42 Q43 ,44 | V03-2320-10 V02-0724-00 V04-0762-00 | 2SC2320(E,F) 2S8724 2SD762 | * * * |
| AUDIO (X09-1380-10) | | | |
| C1 ,2 C3 ,4 C5 ,6 C7 ,8 C9 ,10 | C49-2030-45 C49-2039-45 C91-0092-05 C49-2010-45 C49-2043-35 | POLYSTY 0,3UF J POLYSTY 0,39UF J POLYSTY 220PF J POLYSTY 0,1UF J POLYSTY 0,043UF J | * * * * * |
| C13 ,14 C15 ,16 C17 ,18 C19 ,20 C21 ,22 | C91-0055-05 C90-0429-05 C90-0459-05 C90-0464-05 C91-0094-05 | POLYSTY 27PF K ELECTRO 100UF 25WV ELECTRO 33UF 25WV ELECTRO 33UF 10WV POLYSTY 330PF J | * * * * * |
| C25 ,26 C27 ,28 C31 ,32 C33 ,34 C35 ,36 | C90-0397-05 C91-0052-05 C91-0048-05 C71-1705-01 C91-0054-05 | ELECTRO 100UF 35WV POLYSTY 15PF K POLYSTY 5PF F CERAMIC 5PF C POLYSTY 22PF K | * * * * * |
| C37 ,38 C41 ,42 C43 ,44 C45 -48 C49 ,50 | C91-0058-05 C91-0050-05 C91-0093-05 C90-0432-05 C49-2022-45 | POLYSTY 47PF K POLYSTY 10PF K POLYSTY 270PF J ELECTRO 100UF 63WV MYLAR 0,22UF J | * * * * * |
| C51 -54 C52 C55 C57 ,58 | C25-1433-67 C25-1210-67 C25-1222-67 C91-0092-05 | LL-ELEC 33UF 16WV LL-ELEC 10UF 16WV LL-ELEC 22UF 16WV POLYSTY 220PF J | * * * * |
| 301 1D 302 2D | E06-0514-05 E13-0425-05 | DIN CONNECTOR PHONO JACK | * * |
| L1 -4 | L33-0275-05 | CHOCK COIL | * |
| R1 ,2 R3 ,4 R9 ,10 R11 ,12 R13 ,14 | R48-2239-45 R48-6210-45 R48-2233-15 R48-6210-45 R48-6247-23 | RN 390K J 2E RN 100K J 2E RN 330 J 2E RN 100K J 2E RN 4,7K J 2E | * * * * * |
| R17 ,18 R19 ,20 R25 ,26 R27 ,28 R29 ,30 | R48-6243-25 R48-2215-35 R48-2210-15 R48-2233-45 R48-2230-25 | RN 4,3K J 2E RN 15K J 2E RN 100 J 2E RN 330K J 2E RN 3K J 2E | * * * * * |
| R31 ,32 R33 ,34 R35 -38 R39 ,40 R41 ,42 | R48-6233-05 R48-6268-15 R48-6239-35 R47-5424-25 R48-2251-05 | RN 33 J 2E RN 680 J 2E RN 39K J 2E FL-PROOF RS2,4K J 3A RN 51 J 2E | * * * * * |
| R43 ,44 R45 ,46 R47 ,48 R49 ,50 R51 ,52 | R48-6233-05 R48-2222-25 R47-1415-25 R48-2230-25 R48-2475-93 | RN 33 J 2E RN 2,2K J 2E FL-PROOF RS1,5K J 3A RN 3K J 2E RN 47,5 F 2E | * * * * * |
| R55 ,56 R61 ,62 R63 ,64 R65 ,66 R67 ,68 | R43-1247-25 R48-2681-13 R47-5427-25 R47-5468-25 R43-1222-15 | FL-PROOF RD4,7K J 2E RN 6,81K F 2E FL-PROOF RS2,7K J 3A FL-PROOF RS6,8K J 3A FL-PROOF RD220 J 2E | * * * * * |

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| Ref. No. 参照番号 | Parts No. 部品番号 | Description 部品名 / 規格 | Re- marks 備考 |
|---|---|---|--------------------------|
| R69 ,70 R71 ,72 R73 ,74 R100 R103 | R43-1210-15 R43-1247-15 R43-1222-15 R47-5418-15 R47-5418-15 | FL-PROOF RD100 J 2E FL-PROOF RD470 J 2E FL-PROOF RD220 J 2E FL-PROOF RS180 J 3A FL-PROOF RS180 J 3A | * * * * * |
| VR1 VR2 ,3 VR4 ,5 | R10-4002-05 R12-0502-05 R12-0003-05 | POTENTIOMETER VOLUME TRIMMING POT. OFFSET TRIMMING POT. BIAS | * * * |
| RL1 -4 S1 S2 ,3 | S51-2039-05 S90-0028-05 S90-0029-05 | RELAY SLIDE SWITCH FIG303 SLIDE SWITCH FIG304 | * * * |
| D1 D3 -16 D17 ,18 D19 ,20 D21 ,22 | V11-0271-05 V11-0271-05 V11-0287-05 V11-4100-30 V11-4103-60 | 1S2076 1S2076 WZ-240 WZ-197 XZ-051 | * * * * * |
| D29 -37 Q1 ,2 Q3 ,4 Q5 ,6 Q7 -10 | V11-0271-05 V03-2291-10 V09-0145-30 V03-2259-10 V01-1124-10 | 1S2076 2SC2291(G,H) UPA68H(L,M) 2SC2259(G,H) 2SA1124(R,S) | * * * * * |
| Q11 ,12 Q13 -17 Q18 ,19 | V03-2632-10 V01-0999-10 V03-2320-10 | 2SC2632(R,S) 2SA999(E,F) 2SC2320(E,F) | * * * |
| SWITCH (X13-2650-xx) | | | |
| PL1 -8 PL9 -12 PL13-15 PL16-19 | B30-0219-05 B30-0211-05 B30-0219-05 B30-0211-05 | LAMP(12V,0.08A) FIG406 LAMP(12V,0.04A) FIG401 LAMP(12V,0.08A) FIG406 LAMP(12V,0.04A) FIG401 | * * * * |
| C1 ,2 C3 -6 C7 C8 | C55-1710-38 C22-1247-71 C24-1247-61 C24-1022-71 | CERAMIC 0,01UF Z ELECTRO 470UF 16WV ELECTRO 47UF 16WV ELECTRO 220UF 10WV | * * * * |
| R2 R3 ,4 | R43-1227-15 R47-1415-95 | FL-PROOF RD270 J 2E RS 1,5 J 3A | * * |
| S1 S2 S3 S4 | S42-2027-15 S42-4012-05 S42-2028-05 S42-3034-05 | PUSH SWITCH FIG402 PUSH SWITCH FIG403 PUSH SWITCH FIG404 PUSH SWITCH FIG405 | * * * * |
| D1 D2 D3 D3 | V11-5100-60 V11-7101-30 V11-0271-05 V11-0271-05 | RB-151 EQA01-10(S1) 1S2076 1S2076 | * * * * |
| Q1 ,2 | V04-0855-10 | 2SD855(BD) | * * * * |
| SUB (X13-2660-10) | | | |
| S01 1B | E11-0074-05 | PHONO JACK | * |
| R1 ,2 VR1 502 | R47-5468-15 R10-6001-05 | FL-PROOF RS680 J 3A POTENTIOMETER BALANCE | * * |
| S1 503 | S40-4029-05 | PUSH SWITCH | * |
| 1 3A 2 2A 3 3B 4 1B 5 2B | - - - - - | SUB PANEL MOUNTING HARDWARE(D) MAIN CHASSIS REAR PANEL BOTTOM PLATE | * * * * * |
| 6 1B 7 1B 8 1A 9 2B 10 1B | - - - - - | ESCUTCHEON RECTANGULAR PLUG REINFORCING HARDWARE MOUNTING HARDWARE(A) MOUNTING HARDWARE(B) | * * * * * |
| 11 1B 12 3B | - - | MOUNTING HARDWARE(C) SPACER | * * |
| 13 1A 14 3A 15 2A,3B | A03-0252-02 A20-1549-04 A50-0073-02 | WOODEN CABINET PANEL SIDE PLATE | * * * |
| 16 3A 17 2A 31 3A | B10-0259-03 B30-0210-05 B09-0015-04 | FRONT GLASS LED CAP | * * * |
| C1 C1 C1 | C91-0023-05 C91-0023-05 C91-0079-05 | CERAMIC 0,01UF AC250V CERAMIC 0,01UF AC250V CERAMIC 0,01UF AC125V | UM XH KP |
| 18 1B 18 1B 18 1B 18 1B 19 1B | E03-0013-05 E03-0013-05 E03-0013-05 E03-0014-05 E30-0185-05 | AC OUTLET AC OUTLET AC OUTLET AC OUTLET POWER CORD | KU MX H P X |
| 19 1B 19 1B 19 1B 19 1B 19 1B | E30-0290-05 E30-0291-05 E30-0291-05 E30-0580-05 E30-0587-05 | POWER CORD POWER CORD POWER CORD POWER CORD POWER CORD | KP UM H E T |
| 20 1B | E30-0634-00 | 16P CORD WITH CONNECTOR | * |
| - - - - - | H01-3103-04 H12-0076-03 H12-0077-03 H12-0078-04 H20-0460-04 | CARTON BOX PACKING FIXTURE PACKING FIXTURE PACKING FIXTURE COVER | * * * * * |
| - - | H39-0015-05 H40-0004-04 | PACKING PARTS ANTI-RUST PAPER | * M |
| 21 3B 22 2A 23 2B 24 1B 24 1B | J02-0104-04 J19-0509-04 J19-0514-05 J41-0024-15 J41-0033-05 | FOOT LED HOLDER PC SUPPORT BUSHING BUSHING | * * * X KP |
| 24 1B 24 1B 24 1B | J41-0033-05 J42-0078-05 J42-0078-05 | BUSHING BUSHING BUSHING | TE UM H |
| 25 2B 25 2B 25 2B 25 2B 25 2B | L01-1951-05 L01-1951-05 L01-1952-05 L01-1955-05 L01-1955-05 | POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER | *K P T UM XH |
| 25 2B 26 2A 26 2A 26 2A 26 2A | L01-1956-05 L01-1961-05 L01-1961-05 L01-1962-05 L01-1965-05 | POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER POWER TRANSFORMER | E *K P T UM |

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|-----------------------------------|-------------------|-------------------------|--------------------|
| 26 2A | L01-1965-05 | POWER TRANSFORMER | XH |
| 26 2A | L01-1966-05 | POWER TRANSFORMER | E |
| 27 3A | L01-1971-05 | POWER TRANSFORMER | *K |
| 27 3A | L01-1972-05 | POWER TRANSFORMER | T |
| 27 3A | L01-1975-05 | POWER TRANSFORMER | UM |
| 27 3A | L01-1975-05 | POWER TRANSFORMER | XH |
| 27 3A | L01-1976-05 | POWER TRANSFORMER | E |
| 27 3A | L01-1977-05 | POWER TRANSFORMER | P |
| 28 1A | N09-0323-04 | SCREW | |
| 29 3A | N09-0324-04 | SCREW | |
| 29 3A | N30-4008-45 | PAN HEAD MACHINE SCREW | |
| 30 3B | N09-0328-05 | SCREW | |
| 31 3A | N14-0124-04 | SPECIAL NUT | |
| 33 1B | S31-2050-05 | SLIDE SWITCH | UM |
| 33 1B | S31-2050-05 | SLIDE SWITCH | XE |
| 33 1B | S31-2050-05 | SLIDE SWITCH | H |
| 32 1B | X00-2080-11 | POWER SUPPLY PCB ASSY | *K |
| 32 1B | X00-2080-11 | POWER SUPPLY PCB ASSY | P |
| 32 1B | X00-2080-51 | POWER SUPPLY PCB ASSY | T |
| 32 1B | X00-2080-81 | POWER SUPPLY PCB ASSY | UM |
| 32 1B | X00-2080-81 | POWER SUPPLY PCB ASSY | XH |
| 32 1B | X00-2082-71 | POWER SUPPLY PCB ASSY | E |
| POWER SUPPLY (X00-2080-xx) | | | |
| C1 | C54-2710-39 | CERAMIC 0.01UF P | |
| C2 | C24-1247-71 | ELECTRO 470UF 16WV | |
| C3 1/4 | C54-2710-39 | CERAMIC 0.01UF P | T |
| C3 | C54-2710-39 | CERAMIC 0.01UF P | E |
| C3 | C91-0023-05 | CERAMIC 0.01UF AC250V | UM |
| C3 | C91-0023-05 | CERAMIC 0.01UF AC250V | XH |
| C3 1/4 | C91-0079-05 | CERAMIC 0.01UF AC125V | KP |
| F1 | F05-5021-05 | FUSE(5A) | KP |
| F1 1/2 | F05-5022-05 | FUSE(5A) | UM |
| F1 1/2 | F05-5022-05 | FUSE(5A) | XH |
| F1 1/2 | F05-5024-05 | FUSE(5A) | E |
| F3 | F05-1021-05 | FUSE(1A) | KP |
| F3 | F05-1023-05 | FUSE(1A) | UM |
| F3 | F05-1023-05 | FUSE(1A) | XH |
| F3 | F06-1021-05 | FUSE(1A) | E |
| F4 1/5 | F05-2521-05 | FUSE(2.5A) | UM |
| F4 1/5 | F05-2521-05 | FUSE(2.5A) | XH |
| F4 1/5 | F05-2528-05 | FUSE(2.5A) | TE |
| F6 | F05-5013-05 | FUSE(0.5A) | UM |
| F6 | F05-5013-05 | FUSE(0.5A) | XH |
| F6 1/7 | F05-5015-05 | FUSE(0.5A) | TE |
| F6 | F05-5021-05 | FUSE(5A) | KP |
| 101 1B | J13-0054-05 | FUSE HOLDER | TE |
| 101 1B | J13-0055-05 | FUSE HOLDER X6 | KP |
| 101 1B | J13-0055-05 | FUSE HOLDER X12 | UM |
| 101 1B | J13-0055-05 | FUSE HOLDER X6 | T |
| 105 1B | J13-0055-05 | FUSE HOLDER X12 | XH |
| 105 1B | J13-0055-05 | FUSE HOLDER X12 | E |
| R2 | R47-5427-05 | FL-PROOF RS27 J 3A | |
| RL1 | S51-1027-05 | RELAY | *U |
| RL1 | S51-1027-05 | RELAY | MX |
| RL1 | S51-1027-05 | RELAY | HE |
| RL1 1/2 | S51-1027-05 | RELAY | T |
| RL1 1/2 | S51-1028-05 | RELAY | *K |
| RL1 1/2 | S51-1028-05 | RELAY | P |
| D1 -5 | V11-0295-05 | W06B | |

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

| Region | Code |
|---------------------------|------|
| U.S.A. | K |
| Canada. | P |
| PX | U |
| Australia | X |
| Europe & Scandinavia | E |
| England | T |
| South Africa | S |
| Other Areas. | M |
| Audio Club. | H |

There is no plan for producing units of S type.